The OIL WEEKLY

OIL and GAS ENGINEERING

FOR OIL AND GAS PRODUCERS AND PIPE LINE MEN

THE WEEK'S NEWS INTERPRETED

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VOLUME 31 APRIL 27, 1936 NUMBER 7

CRAFTSMANSHIP

Lorenzo Ghiberti, Italian sculptor of the 15th Century, devoted 27 years of his life to the execution of the set of bronze doors for the Baptistery of St. John, at Florence, shown above. The panels illustrate 10 Old Testament stories. Standing before them a century later, Michelangelo said, "They are so beautiful that they might fittingly stand at the gates of Paradise."

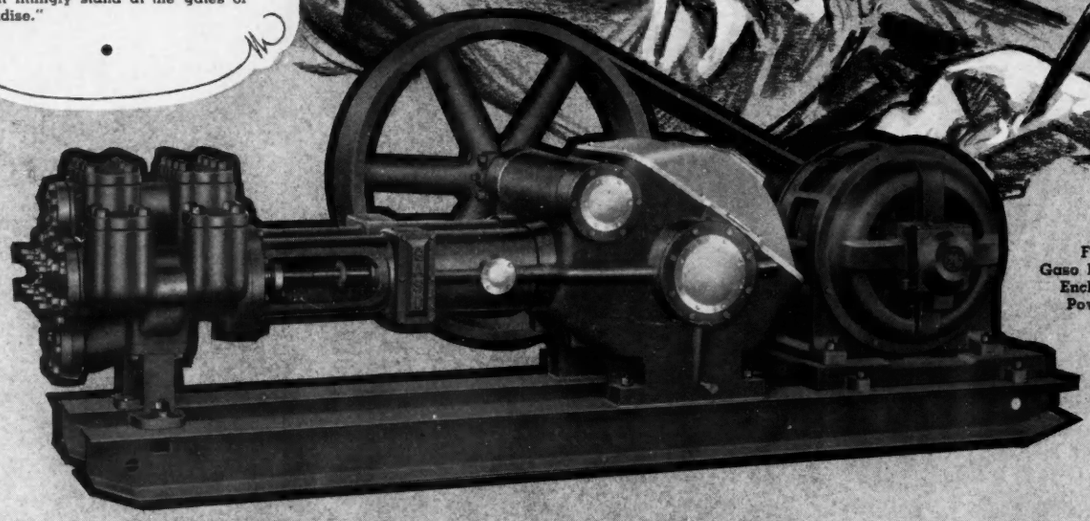

FIG. 1742
Gaso Duplex Piston
Enclosed Type
Power Pump

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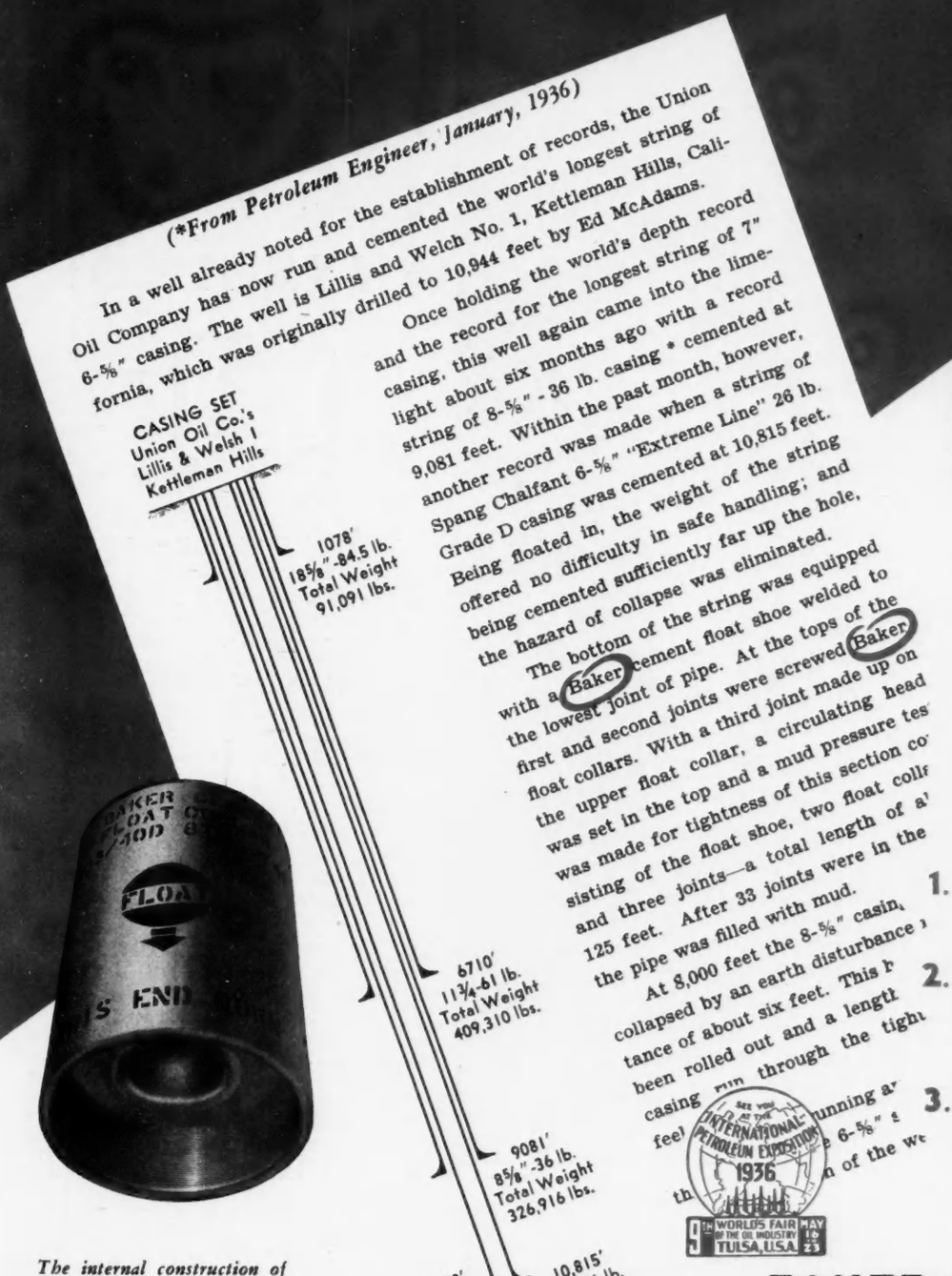
*(*From Petroleum Engineer, January, 1936)*

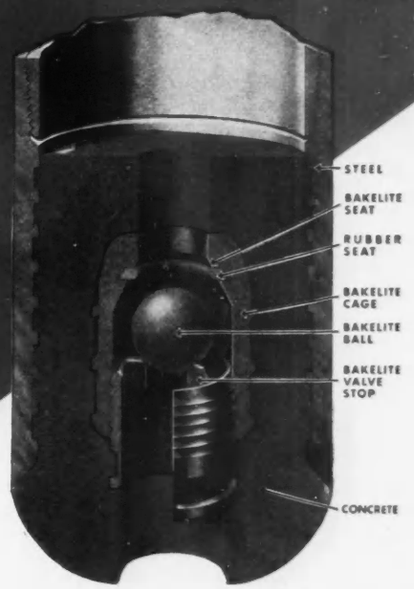
In a well already noted for the establishment of records, the Union Oil Company has now run and cemented the world's longest string of 6-5/8" casing. The well is Lillis and Welch No. 1, Kettleman Hills, California, which was originally drilled to 10,944 feet by Ed McAdams.

Once holding the world's depth record and the record for the longest string of 7" casing, this well again came into the limelight about six months ago with a record string of 8-5/8" - 36 lb. casing * cemented at 9,081 feet. Within the past month, however, another record was made when a string of Spang Chalfant 6-5/8" "Extreme Line" 26 lb. Grade D casing was cemented at 10,815 feet. Being floated in, the weight of the string offered no difficulty in safe handling; and being cemented sufficiently far up the hole, the hazard of collapse was eliminated.

The bottom of the string was equipped with a Baker cement float shoe welded to the lowest joint of pipe. At the tops of the first and second joints were screwed Baker float collars. With a third joint made up on the upper float collar, a circulating head was set in the top and a mud pressure test was made for tightness of this section consisting of the float shoe, two float collars and three joints—a total length of about 125 feet. After 33 joints were in the casing and the pipe was filled with mud. At 8,000 feet the 8-5/8" casing collapsed by an earth disturbance at a distance of about six feet. This has been rolled out and a length of casing run through the tight feel running a[t] the 6-5/8" [c]asing of the well.



The internal construction of Baker Cement Float Collars is similar to that shown above at right.



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THE OIL WEEKLY

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PUBLISHED BY
THE GULF PUBLISHING COMPANY
HOUSTON, TEXAS
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SPECIALIZED OIL JOURNALS
Published by
THE GULF PUBLISHING COMPANY

BRANCH OFFICES

NEW YORK.....250 Park Ave.
PITTSBURGH.....Standard Life Bldg.
CHICAGO.....332 S. Michigan Ave.
LOS ANGELES.....Haas Bldg.
TULSA.....Hunt Bldg.
FORT WORTH.....W. T. Waggoner Bldg.
WASHINGTON.....Albee Bldg.

Member Audit Bureau of Circulations.

Published every Monday. Single Copies 15 cents. Subscription price: domestic and foreign, $2.00 a year. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879. Subscription restricted to those engaged in the producing and pipe line branches of the oil industry or the manufacturing and distribution of oil field supplies.
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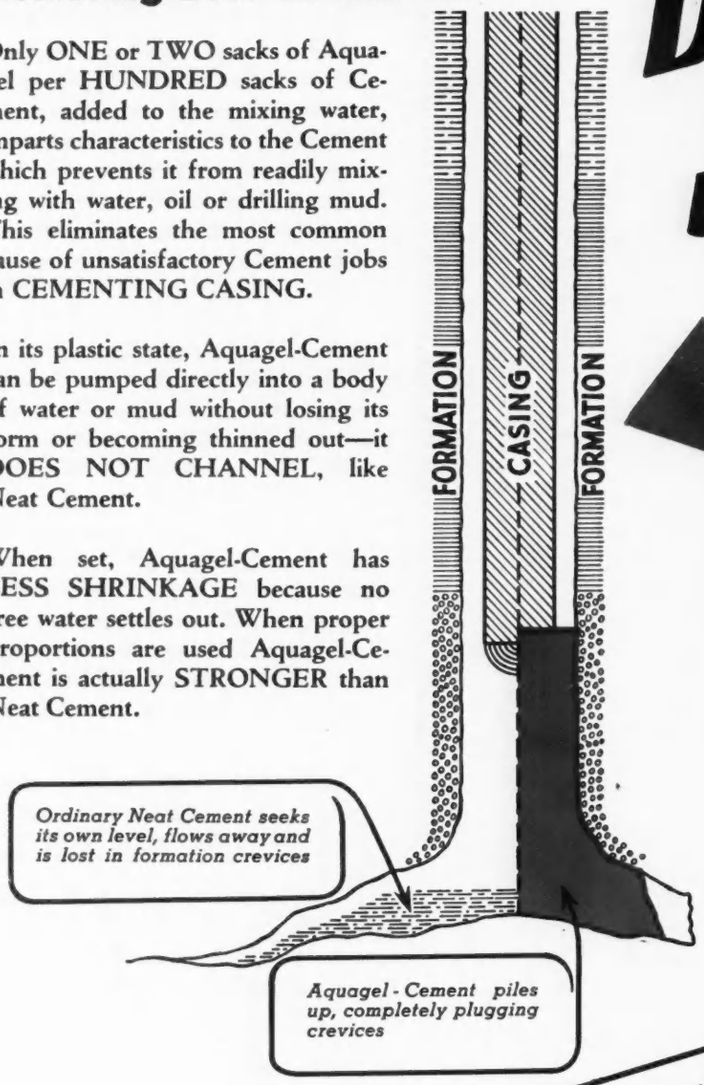
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APR 29 1936

THE OIL WEEKLY

FOR OIL AND GAS PRODUCERS
AND PIPE LINE MEN

ENGINEERING NEWS STATISTICS

WARREN L. BAKER, Editor.

. . . this Week

THE Bureau of Mines in its regular monthly forecast of oil demand has recommended an increase of only 29,000 barrels for United States production over April. The small increase is due to the Bureau's belief that heavy stocks of gasoline and crude oil, and an anticipated decline in gasoline exports, threaten the industry with difficulties unless both producers and refiners co-operate in reducing storage. Stocks of finished and unfinished motor fuel increased from 71,604,000 barrels on February 29 to 73,182,000 barrels a month later. Stocks of crude oil also are high, the report states. Meanwhile, European nations appear to have satisfied their wants for crude oil as a military aid, and exports are expected to decline as a result. **Page 8.**

SECRETARY of the Interior Harold L. Ickes last week announced that holders of federal prospective permits were not to delay drilling in unproved areas because unit operating plans had not been approved. The announcement was prompted because of the large number of inquiries made to Washington. More than 700 unit plans, affecting nearly 3000 permits, have been filed with the Department of Interior. **Page 9.**

THE Oklahoma City drilling zone controversy ended last week when a district court judge ruled the city did not have any control over state-owned lands within the city limits. This means that the state can proceed at once with its plan to lease its lands for drilling. Heretofore, city lands adjacent to the state lands have been leased, but city officials refused the state the right to lease its land. **Page 9.**

SOCONY-VACUUM CORPORATION and The Texas Company are jointly negotiating for purchase of the stock of South American Gulf Oil Company operating in Colombia, South America. The purchase would include a part of the Barco concession, where 9 out of 11 completions have been commercial producers. The two companies would participate jointly in the purchase and development of the Barco concession. **Page 46.**

CORROSION damage to production equipment in the sour oil producing fields of West Texas and Southeast New Mexico has been reduced by several companies following an extensive study of the action of hydrogen sulphide and salt water under varying operating conditions. Both changes in equipment and operating methods have played an important part in reducing the damage of corrosion. Outstanding has been the development and use of special alloys, less severe use of equipment that suffers from fatigue, and more careful handling of salt water. **Page 19.**

A DISTRICT court judge has granted the Texas Railroad Commission injunctions against four East Texas refineries, which prohibit the companies from moving their oil products without tenders. The plants are alleged to have used false manifests in some instances. **Page 9.**

THE Railroad Commission order allowing a second well on the famous Brown tract in the East Texas field has been upheld by a district court judgment. In the present case Humble Oil & Refining Company was attempting to set aside the order that allowed Brown a second well after he had combined his subdivided tracts into one unit. **Page 10.**

CONTINENTAL Oil Company announced last week that it will spend $12,000,000 in the Geneseo area of northern Rice County and the Mound Ridge or Graber area of southeastern McPherson County, Kansas. The expenditure will be for the drilling of approximately 300 wells and immediate construction of an eight-inch pipe line that will tie in with an existing line at Valley Center, near Wichita. The line will give West Central Kansas an outlet to Continental Oil Company's Ponca City, Oklahoma, refinery.

OIL companies generally had larger earnings in the first three months of 1936 than they did in the first quarter last year, with the exception of some operating along the Pacific Coast where adverse market conditions prevailed. It is indicated the second quarter will also be favorable, as earnings for April brought a continuation of the first quarter's trend. Furthermore, a few companies showing losses in the first quarter have definite reasons for a reversal of the situation in the second quarter. **Page 44.**

The Oil Man's Calendar

MAY 5– 8	American Gas Association, Natural Gas Department, Dallas, Texas.
13–15	American Petroleum Institute, Mid-Year Meeting, Tulsa, Oklahoma.
13–15	Natural Gasoline Association of America, Tulsa, Oklahoma.
16–23	International Petroleum Exposition and Congress, Tulsa, Oklahoma.
19	National Association of Purchasing Agents, Tulsa, Oklahoma.
21	Independent Petroleum Association, Tulsa, Oklahoma.
22	National Stripper Well Association, Tulsa, Oklahoma.
29–31	National Oil Scouts Association, Annual Meeting, Baker Hotel, Dallas, Texas.
JUNE 4– 5	American Petroleum Institute, Division of Production, Eastern District, Wm. Penn Hotel, Pittsburgh, Pennsylvania.
17–20	American Society of Mechanical Engineers, Dallas, Texas.
18–19	Pennsylvania Grade Crude Oil Association, State College, Pennsylvania.
JULY 31	Interstate Oil Compact Commission, Dallas, Texas.
NOV. 9–12	American Petroleum Institute, 17th Annual Meeting, Chicago, Illinois.

Difficulties Loom

BUREAU SUGGESTS ONLY SLIGHT MAY INCREASE DUE TO STOCKS

WASHINGTON, D. C.

TOP-HEAVY stocks of gasoline and crude oil, and an anticipated decline in gasoline exports, threaten again to involve the oil industry in the difficulties it suffered prior to adoption of its recovery code, it was warned April 24 by the Bureau of Mines.

Because of the urgent necessity for reducing stocks, the Bureau, in its monthly forecast of demand, places the justifiable daily average production of crude oil for May at 2,826,333 barrels, an increase of only 29,000 barrels over the April recommendation, as against an increase of 58,400 barrels for April over March. The May average, however, will be 265,100 barrels, or 10 percent, above the figure set by the federal agency for May, 1935.

At the same time, the domestic motor fuel demand for May is estimated by the Bureau at 42,420,000 barrels, a daily average of 1,368,400 barrels, which is 79,100 barrels more than the April daily average of 1,389,300 barrels. The May figure represents an increase of nearly 8 percent over the corresponding month last year. The fact that Italy and certain other European countries appear now to have satisfied their needs for American gasoline for the building up of military supplies, the record-breaking stocks of motor fuel and holdings of crude oil so heavy as to threaten the success of the interstate compact, were cited by the Bureau as matters requiring the serious study of the oil industry.

To provide the interstate compact commission and the state authorities increased information, the Bureau is preparing to enlarge its weekly crude stock report to show stocks by origin for the principal states and recommended that efforts be made to keep state allowables at a point at least no higher than demand.

Exporters of motor fuel, who shipped nearly 2,700,000 barrels in May, 1935, forecast their shipments for May, 1936, at less than 2,000,000 barrels, the report commented. After allowing for the possibilities that the exporters of 1935 are not the exporters of today, it would seem that the desire of certain nations to accumulate stocks of American gasoline for purposes of national defense has been satisfied for the time being, and that few unusual foreign orders may be expected in the near future. Consequently, the forecast of exports for May, 1936, has been set at 2,100,000 barrels, a material decline from the estimate (2,800,000 barrels) of April.

Peak Gasoline Stocks

A renewed menace of distress gasoline, which two years ago caused much difficulty in the industry, is seen by the Bureau in the increase in stocks of finished and unfinished motor fuel from 71,604,000 barrels on February 29 to 73,182,000 barrels March 31, when they stood at the highest total ever recorded.

Although some gasoline buyers might not consider this total too high, it was declared, it is the opinion of many refiners that there was at least 5,000,000 barrels too much gasoline on hand at the beginning of April.

To prevent physical waste through evaporation losses and eliminate the possibility of "distress" gasoline, it will be necessary to draw heavily on stocks from now until the end of October. As part of this program of reduction, it is recommended that 3,100,000 barrels be withdrawn in May.

Motor benzol production and direct sales and losses of natural gasoline are estimated for May at 900,000 barrels, giving 40,520,000 barrels as the required production of finished and unfinished gasoline for the month, recommended output by districts being as follows: East Coast, 6,640,000 barrels; Appalachian, 1,650,000; Indiana-Illinois, 6,620,000; Oklahoma, 2,770,000; Kansas-Missouri, 2,490,000; Texas Inland, 3,140,000; Texas Gulf, 8,100,000; Louisiana Gulf, 1,610,000; Arkansas-Louisiana Inland, 1,000,000; Rocky Mountain, 930,000; California, 5,570,000.

The estimate of the percentage of natural gasoline used by refiners to the total production has been reduced from six in April to 5.5 for May, in accordance with the usual seasonal decline indicating a need for 2,230,000 barrels of natural gasoline to be utilized at refineries, and 38,290,000 barrels to be made from crude oil.

"Although the yields of January and February, 1936, were unusually low," the Bureau commented, "It is expected that the usual increase in percentage recovery will take place as the demand for heating oils falls off the estimated yield of cracked and straight-run gasoline accordingly having been raised from 44.40 percent in April, to 44.51 percent in May. Applying the latter to the total refinery gasoline gives 86,030,000 barrels of crude oil required for runs to stills."

Runs to stills of foreign crude for May are estimated at 2,800,000 barrels, the same as in April, white crude-oil exports are estimated at 4,200,000 compared with 3,900,000 for April and consumption as fuel at 2,200,000, unchanged. Provision is made for the withdrawal of 65,000 barrels daily from crude-oil stocks, which is 10,000 barrels more than the average recommended for April but about equal to the daily average withdrawal in 1935.

"The present level of crude-oil stocks is so high that it is suggested that more attention be directed toward setting state allowables at such points that actual production "including over production" is at least no higher than demand," it was stated."

On the basis of the formula used the Bureau finds the May required production of crude oil to be 87,615,000 barrels as compared with 83,919,000 for the current month. The daily average production will be 2,826,300 barrels against 2,797,300 barrels for April. The recommended level of daily production for the several states will be as follows:

Texas, 1,132,500 barrels against 1,122,800 barrels in April; California, 544,000 against 552,600; Oklahoma, 538,300 against 525,000; Louisiana, 170,500 against 160,900; Kansas 150,100 against 146,000; New Mexico 651,900 against 63,200; Pennsylvania 43,000 against 44,800; Michigan 38,200 against 41,000; Wyoming 35,600 against 34,800; Arkansas 31,000 against 30,500; Kentucky, 13,900 against 14,400; Montana 12,900 against 12,300; New York 11,800 against 11,100; Illinois 11,700 against 11,000; Ohio 10,500 against 10,800; West Virginia 9900 against 10,000; Colorado 4400 against 4100; Indiana 2100 against 2000 barrels.

NON-PROFIT SHOW

Houston men organize to plan oil expositions

HOUSTON.

PLANS looking toward an organization of oil men and equipment men having for its purpose the holding of petroleum expositions in Houston are under way.

A well attended meeting of manufacturers and oil men was held last week at which the question of a show in Houston was discussed.

At this meeting those present discussed the advisability of holding any show in Houston, the advisability of continuing expositions in Houston under the system which has been in vogue for several years and the advisability of the industry organizing an association to hold oil shows not more frequently than once in two years, with paid management in charge of the operation of such expositions as would be held.

The individuals present expressed themselves as being in favor of a non-profit making corporation of oil and equipment people owning the show.

On Wednesday of the past week a committee, consisting of John R. Suman, vice president of Humble Oil & Refining Company; Chase Sutton, division manager of The Pure Oil Company; T. J. Donoghue, vice president, The Texas Company; W. L. Childs, vice president and general manager, Reed Roller Bit Company; S. P. Brown, vice president of Hughes Tool Company; Ed Lorehn, general manager of Cameron Iron Works and Ray Dudley, publisher of THE OIL WEEKLY, was appointed to confer with the Tulsa Exposition with reference to the frequencies of the expositions. The desire was expressed to exercise the closest cooperation with the International Petroleum Exposition in Tulsa.

When the committee appointed has had its conference with the officials of the International Petroleum Exposition at Tulsa in May, a permanent organization will be formed, charter taken out and plans for future expositions will be made.

The association has not progressed far enough to consider the question of management. Reports that the manager of the exposition which has been held in Houston for the last several years will be made the manager of the Houston show are without foundation as no consideration of management has been had to date.

Continue Drilling

LACK OF APPROVED UNITS NOT TO RETARD FEDERAL LAND WORK

WASHINGTON, D. C.

EXPLORATORY drilling in unproven areas by holders of Federal prospective permits will not be affected by lack of approved unit operating plans, it was explained by Secretary of the Interior Harold L. Ickes last week.

Official announcement that exploration is to continue without restriction was promoted by a large number of inquiries received in Washington as to the standing of permit-holders under departmental requirements for development of new fields on the unit plan.

More than 700 unit plans, affecting nearly 3000 permits, have been filed with the department, it was said, and action on many has been delayed, partly on account of inadequacy of the plans and partly on account of lack of personnel for their review and revision.

"Many of the plans, as submitted," it was stated, "failed to accomplish the statutory purpose of more properly conserving the oil or gas resources and are not of such character as to warrant a determination that they are necessary or advisable in the public interest, a determination that must be made by the secretary under the statutes before he can approve a unit plan.

"The basic conditions for fulfilling the statutory requirements are that sufficient lands in the unit area be subject to the plan to give effective control of operations and production; that the unit area, comprised of a single field or substantial part thereof, contain lands which have some possibility of being productive of oil or gas; and that the Secretary of the Interior shall have a reasonable degree of control over the rate of prospecting and development and the quantity and rate of production."

A speciment form of plan for unit development and operation of fields embracing Federal permits or leases, which expresses the policy of the Interior Department and conforms to the mineral leasing act, has been formulated and made available for distribution as an aid in the development of unit plans.

This form, it was explained, provides that compliance with the terms of the unit agreement shall be deemed to be compliance with the applicable conditions of prior extensions of gas and oil prospecting permits that were conditionally extended to December 31, 1937, and that unless the Secretary of the Interior shall have found that diligence has not been exercised under the unit agreement, permits subject to the agreement and outstanding on December 31, 1937, shall be extended to December 31, 1938, subject to continued compliance.

It further provides that when any permit has been determined by the secretary to have been, on or before its date of expiration, wholly or in part within the limits of any producing oil or gas field to which the unit agreement shall pertain, which permit has been included in the agreement, on prompt and proper application therefor, a lease will be issued for the area of the permit included in the agreement without further proof of discovery. Leases under such a plan remain in force without limiting term so long as the agreement is operative, and leases operated under such a plan are excepted from acreage holding limitations of the leasing law to which they would otherwise be subject.

CONTROVERSY ENDS

Oklahoma City has no control over state lands

OKLAHOMA CITY.

OKLAHOMA CITY'S drilling zone controversy was brought abruptly to a halt and Governor E. W. Marland's forces claimed complete victory when District Judge Ben Arnold held early in the week that state lands lying within the boundaries of Oklahoma City are in fact an "island" and therefore not subject to the jurisdiction of city officials under the zoning act of 1923. Only a few minutes after Judge Arnold's decision District Judge R. P. Hill granted K. & L. Petroleum Company a temporary injunction restraining the city from interfering with the drilling of a test on the Harn tract immediately southwest of the state capitol building.

"It looks like we were right all along doesn't it," chuckled Governor Marland when informed of the two decisions. "I am not going to let down the guard however. The order doesn't seem to have been useless. The military zone permitted us to go right along with the work on the wells, which we couldn't have done without the militia. I'll be back in the office tomorrow and will be ready to lift the military order then unless the city appeals."

To Appeal Decision

"Harlan Dupree, municipal counselor, served notice of appeal immediately after Judge Arnold's decision. The opinion stated that the military order is, "Void, expensive and unlawful and can have no good effect, but on the contrary tends to breed contempt for law and its enforcement." It the meantime 15 militiamen were on duty as Sunray Oil Company spudded one test and had several others about ready to start drilling on state lands adjacent to the capitol building and executive mansion. Oklahoma City residents in the exclusive Lincoln Terrace Addition southeast of the capitol building continued their fight to defeat further extension of the drilling zone on May 12, when a city election will be held to decide the question. It was generally believed that extensionists would be successful.

Governor Marland's demand for closer control of gas-oil ratios and the suggestion that the field might be covered by a military order in event that no action was taken to reduce gas and gas energy wastage was met by the industry with the appointment of a special committee to assemble all the pertinent data and make recommendations as to a possible solution. C. V. Sidwell, superintendent of production for British American Oil Producing Company was made chairman of the committee to serve with C. M. Rader, Phillips Petroleum Company; Hubert Bale, Fairfax Oil Company; C. E. Wright, Indian Territory Illuminating Oil Company; Dan O. Howard, deputy conservation officer; S. F. Shaw, Westgate Oil Company; and R. R. Owens, representing Governor Marland. The committee had its first meeting April 20, at which time a tentative plan of study was formulated. John T. Hayward, chief engineer for Barnsdall Oil Company is vice chairman.

ISSUE INJUNCTIONS

Prohibit four East Texas plants moving products

AUSTIN.

INJUNCTIONS prohibiting four East Texas refineries from moving oil products without Railroad Commission manifests or tender were issued last week by Judge J. D. Moore in the 98th District Court. Penalties of $27,000 were sought in these cases.

The operators were variously charged with failure to have legal manifests, failure to file manifests, and moving oil products without tender.

Suits were filed against Neal Moore, operating as N & M Refining Company; Clyde Smith doing business as Smith Refining Company; J. N. Bonner, operating as Frisco Refining Company; Chief Refining Company; G. O. Sory, Chief Products Company.

Attorney General McCraw stated that in some instances the manifests carried by truck drivers affected by these suits were not the bona fide manifests required by the Railroad Commission.

GAS OUTPUT CUT

Texas allowable for May reduced by commission

AUSTIN.

AN order reducing gas allowables for the month of May was issued by the Texas Railroad Commission on April 22.

This reduction for the state as a whole occurred despite the fact that allowables for sweet and sour gas outside the Panhandle were increased, as well as the sour gas allowable within the Panhandle. This resulted in a lower allowance for Panhandle sweet gas only.

The total state allowable was 1,396,095,000 cubic feet, and the April allowable was 1,421,956,000 cubic feet.

The allocation to the Panhandle was 1,081,849,000 cubic feet per day. The sweet gas allowance was 635,895,000 cubic feet, and the sour gas allocation was 446,000,000 cubic feet, which was 42,690,000 cubic feet per day more than the allowance for April.

Outside the Panhandle the commission fixed the sweet gas allowance at 301,242,000 cubic feet, and the sour gas allocation totaled 13,004,000 cubic feet.

The total allowance was 89,692,000 cubic feet per day below the nominations filed.

Order Is Upheld

BROWN IS ALLOWED SECOND WELL ON EAST TEXAS TRACT

AUSTIN.

JUDGE RALPH YARBOROUGH, in 53rd District Court, rendered judgment last week for the defendant in the case styled Humble Oil & Refining Company vs. Railroad Commission and Mrs. Gladys McCook.

This judgment confirmed the Railroad Commission order which allowed a second well on the Brown tract, the same well involved in the Brown vs. Humble case which was decided by the Texas Supreme Court.

In the first suit, which went to the Supreme Court, the question involved was whether the subdivided tract was entitled to a well to protect vested rights. The Supreme Court held that the subdivision was a violation of Rule 37, and that each tract was not entitled to a well.

The point involved in the new suit is to determine whether the two tracts combined in one unit would be entitled to two wells.

A jury in the district court presided over by Yarborough found recently that the second well was essential for the prevention of physical waste.

In his decision last week Yarborough cited a case handed down by the Third Court of Civil Appeals at Austin in which that court held that if the Railroad Commission denied a permit on improper grounds, the denial order nevertheless would be sustained by the court if the well should have been denied on other grounds.

From this case Yarborough reasoned that the reverse would be true, that is, that if the commission allowed a well and cited vested rights as the cause, and the operator was not entitled to a well on the grounds of vested rights, but was entitled to drill a well for the prevention of physical waste, then the court should sustain that permit even though the reasoning was incorrect.

Attorneys for Humble Oil & Refining Company plan an appeal.

PANHANDLE HEARING

AUSTIN.

A GENERAL hearing on conditions in the Panhandle will be held at Amarillo before the Texas Railroad Commission on May 11. The commission will have before it three problems which require immediate attention.

Two phases of the water exemption question will be investigated. This will include a study of wells throughout the field which are making water, where operators have requested higher allowables for their wells. The commission will also take up at that time the application of the Sunray Oil Company for water exemptions on certain wells in the Moore County area.

Further evidence will be taken on gas/oil ratios in the field. This question has been studied for more than two years and appears to be little nearer solution than it was at the outset. Operators of many wells which have exceedingly high gas/oil ratios have told the commission that to restrict the gas production from their wells would not lower the ratio but would result in a decrease in the production of oil, which would render their property worthless.

The commission has contemplated a provision which would result in allowing each well a total displacement allowance similar to that made in several fields in Southwest Texas. This plan has also met with a protest from operators.

REVISED CODE?

WASHINGTON, D. C.

IF the revised petroleum code is sanctioned at meetings of Pennsylvania and Kentucky oil men, scheduled to be held during the next three weeks, it will be in the hands of the federal trade commission for approval by June 1.

Drafters of the revised code April 23 stated in Chicago the work of revision was almost complete and that the code had been endorsed by refiners and dealers of the nation' and by jobbers of the Midwest.

Only two important changes were made in the code, other changes being merely for the purpose of clarifying certain phrases used in the original draft. The two changes made involved leaving out the provision requiring dealers to maintain price postings for 24 hours after they had been posted and insertion of a clause prohibiting the making of loans within the industry.

Houston Oil Show

EQUIPMENT AND ENGINEERING EXPOSITION CLOSES 1936 STAND

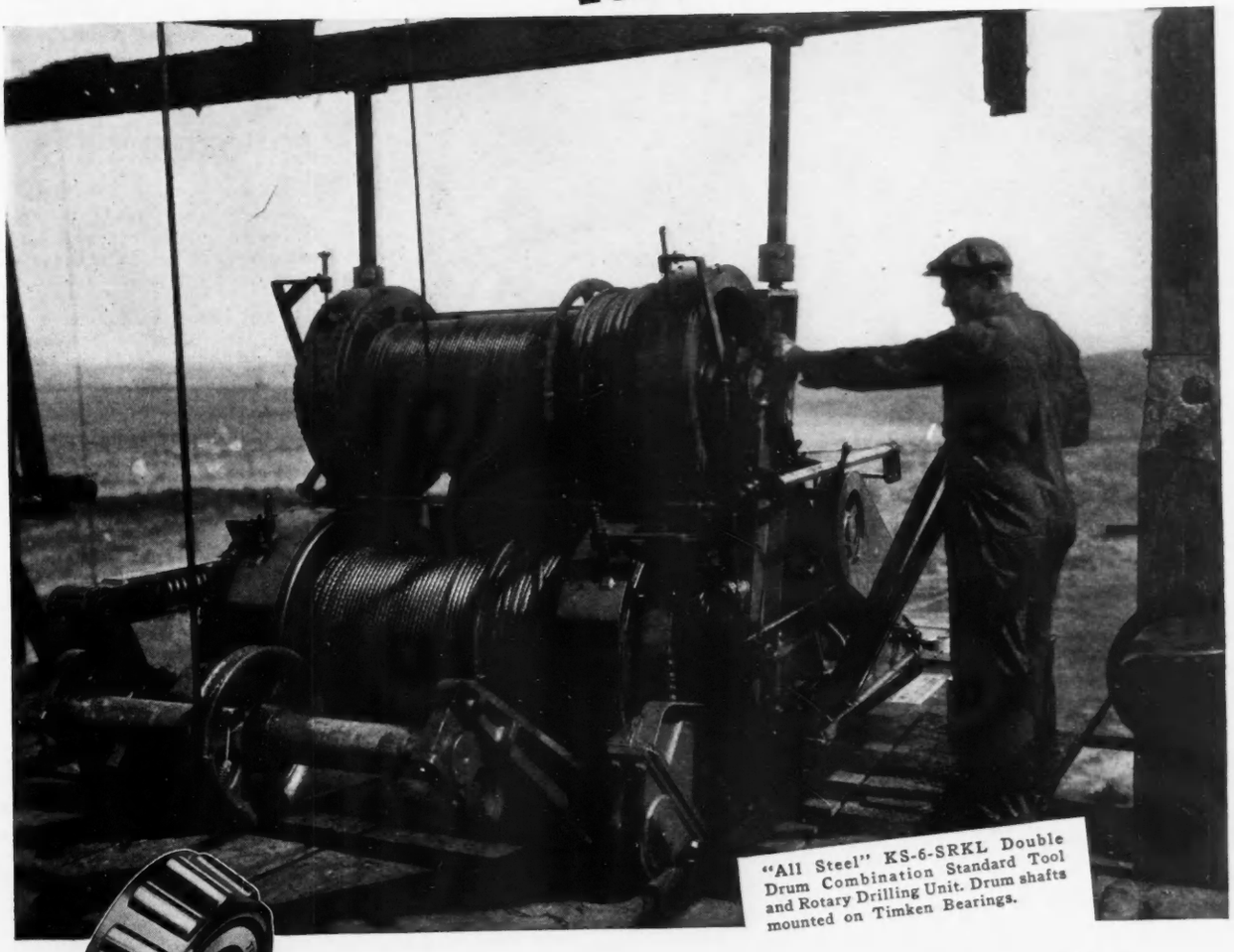
HOUSTON.

THE Oil Equipment and Engineering Exposition for 1936 finished its six-day stand late Saturday.

A feature of the show was the attractive display of a variety of oil field equipment. Eight trophy shields were presented to the exhibitors judged as having the best booths. First prize went to George E. Failing Supply Company, who presented two portable core drill machines against a background of red and silver. One of the units was in actual operation. Baroid Sales Company carried off second

George E. Failing Supply Company with two truck-mounted portable core drill machines won first prize on its display.

Where TIMKEN LOAD CAPACITY COUNTS



"All Steel" KS-6-SRKL Double Drum Combination Standard Tool and Rotary Drilling Unit. Drum shafts mounted on Timken Bearings.

Anti-friction efficiency cannot safely be considered apart from load-carrying capacity in bearings for heavy-duty oil field equipment. The one is as necessary as the other. If anything, however, the emphasis should be placed on load capacity, for that influences machine dependability and endurance to a greater extent than any other single factor.

The oil fields hardest load-carrying jobs are easy for Timken Bearings. Timkens have a combination that defies all loads—radial, thrust or both together—the exclusive combination of Timken tapered construction, Timken positively aligned rolls and Timken Alloy Steel.

The same combination holds moving parts in correct and constant alignment —another important contribution to extended equipment life.

For maximum anti-friction performance plus full load-carrying assurance, specify Timken Bearing Equipped.

THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO

TIMKEN *TAPERED ROLLER* BEARINGS

Second prize for outstanding booth went to Baroid Sales Company, which had a modernistic display of its drilling muds.

honors by its display of drilling muds and a portable mud testing laboratory. Third prize become the possession of Hill & Foster, who used blue and silver to attractively set off its automatic cathead device.

Others who received trophies for their booth displays were: Gulf Engineers, Inc.; Halliburton Oil Well Cementing Company; Darling Valve & Manufacturing Company; Bettis Sales Company; and Shaffer Tool Works.

The following concerns received honorable mention for outstanding exhibits: Eastman Oil Well Survey Company; Reda Pump Company; Hercules Motor Corporation; Beard & Stone Electric Company; Petroleum Electric Power Club; Caterpillar Tractor Company; Tips Engine Works; and J. E. Bobo.

The booths were judged by the following men: W. T. Doherty, assistant chief petroleum engineer, Humble Oil & Refining Company; M. G. Earley, superintendent, J. S. Abercrombie Company; E. C. Lawry, assistant production manager, Shell Petroleum Corporation; Werner Muller, managing director, Alfred Wirth & Company, Erkelenz, Germany; Chase E. Sutton, division manager, Pure Oil Company.

The first aid contests of the exposition were preceded by an elimination contest between six teams of Humble Oil & Refining Company, which was won by Tomball.

The Magnolia Petroleum Company's pipe line department team from Beaumont won the grand prize in the first aid contest held Thursday night. The team had a score of 4½ points discount. It was awarded a silver loving cup presented by the oil exposition management.

Second prize was taken by the Tomball team of Humble Oil & Refining Company. This team received a silver cup presented by Houston Safety Association. Third prize became the possession of the Goose Creek team of Gulf Refining Company.

The prize for the best artificial respiration team, given by E. D. Bullard Company, went to Humble Oil & Refining Company's Baytown team.

The Annual Oil Men's Banquet was held in the City Auditorium and was attended by many oil and supply men.

The U. S. Army Coast Artillery supplied eight trucks with four of the largest searchlights during several of the evenings, operating them for the attraction of the Exposition. Each of these lights on the searchlights has 8,000,000 candlepower light.

A golf tournament was held for all out-of-town and local oil men attending the Exposition, at the Brae-Burn Country Club. A large silver loving cup was presented to the winner with the highest score and additional prizes were given to other winners.

RESCIND ORDERS

AUSTIN.

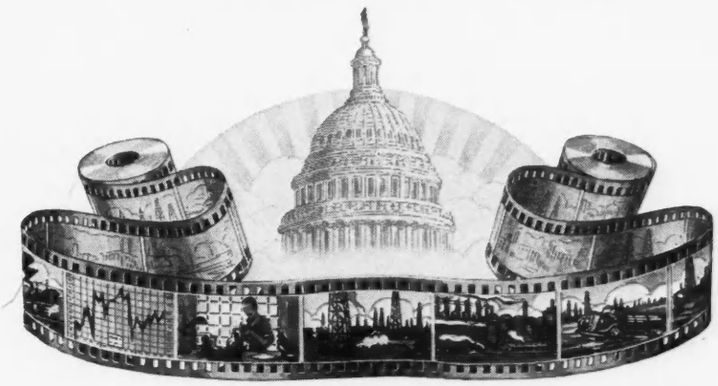
AN order has been issued by the Texas Railroad Commission rescinding prior orders which require retests of potentials of wells treated with acid or shot.

An order was issued on February 11 and another on March 1 requiring these retests. In those orders the commission announced that allowables would be based on the test made immediately after the well was treated or shot. That allowable would remain in effect for the next 60 days. During the latter 20 days of this 60-day period those orders provided that a retest should be made upon which potential allowables would be based.

The order issued last week indicated that the commission would hold a hearing in the near future at which evidence would be taken before any other orders of this nature are issued.

Hill & Foster Company exhibit of automatic catheads that won third prize for its attractiveness.

The Changing Panorama



THE OIL WEEKLY'S COMPOSITE VIEW OF INDUSTRY

Edited by L. J. LOGAN, Associate Editor

DESPITE a considerable number of disturbing factors, the current outlook for the oil industry probably should be classed as favorable.

There are some optimistic analysts, in fact, who peer ahead four or six weeks, and are led to believe that gasoline prices will improve further and that crude prices may advance about 10 or 15 cents a barrel more.

Adverse Factors Discounted

This peering is through the fog of market unsteadiness that has surrounded the industry for several weeks. The unsteadiness has been generated largely by uncertainties over crude production control at Rodessa and by weather conditions that have not been conducive to normal consumption of gasoline and kerosene.

The optimistic ones are assuming that the Rodessa situation is well in hand and likely will continue so, and that the weather soon will become more favorable for petroleum consumption.

Gasoline Stocks High

It is a fact that gasoline stocks are about 11 percent larger than a year ago, while gasoline demand in April has been running only about 7½ percent higher. The gasoline inventories consequently are larger than desirable. They were overbuilt in recent months, due to unusually cold weather that restricted gasoline consumption and at the same time caused overproduction of motor fuel, in connection with supplying the heavy demand for heating oils. However, the high point of gasoline stocks for the year has been passed, and the downward trend that normally continues until about mid-November is in progress. The latest weekly report of the American Petroleum Institute, covering the week ended April 18, showed that the stocks of finished and unfinished gasoline in the United States dropped 639,000 barrels during the period, despite a 40,000-barrel increase in average daily crude runs to stills.

Refineries have been urged to practice rigid restraint in their plant operations, in view of the heavy inventories, and possibly can be counted on to cooperate. Meanwhile, there is some hope that gasoline consumption may be higher this spring and this summer than the generally accepted estimates, as production and sales of automobiles have been running high. It is hoped, consequently, that gasoline prices will be favorable and possibly higher in the months ahead, despite the heavy inventories.

Tending to support this hope is the fact that the gasoline prices have gone unchanged through the past several weeks of uncertainties and large inventories. Now with a somewhat more encouraging situation prevailing at Rodessa, and with higher consumption of gasoline and kerosene in prospect, it is quite conceivable that the product prices soon may show some improvement.

States Disregarding Bureau

It must be recognized, however, that the crude production situation is not entirely satisfactory. There has been lately a somewhat disturbing trend among the state authorities to disregard the recommendations of the Bureau of Mines in fixing allowables.

The Texas Railroad Commission in its monthly order for May fixed the Texas allowable substantially above the bureau suggestion. It also fixed a higher allowable for April. Previously, the commission had adhered closely to the bureau allocations, and at times limited output below the recommendations. As of May 1 the commission fixed the Texas allowable at 1,165,955 barrels daily. The Bureau of Mines had estimated that the state's demand for May would be 1,139,000 barrels daily, and recommended that the demand be met by producing 1,132,500 barrels daily and by withdrawing 6500 barrels daily from storage. The commission order therefore exceeds the demand estimate by about 27,000 barrels, and as the Texas allowable grows each month with completion of new wells, the excess will be larger in the latter part of May. In this connection, it may be mentioned that the mid-January crude price increases, originating in Texas, materialized largely because the railroad commission for January fixed the Texas allowable even below the Bureau of Mines recommendation.

Despite this new trend in Texas, however, Louisi-

ana still rates as the outstanding over-producing state from the standpoint of the Bureau of Mines recommendations. In March the Louisiana output averaged approximately 40,000 barrels a day more than the federal allocation. For the week ended April 18 the state showed an excess of 50,000 barrels per day. For several months the Louisiana excess has been around these levels, with flush fields in both the northern and the Gulf Coast sections of the state straining at the slim tethers. In addition, there have been whispers of unreported excesses, in the form of surreptitious production at Rodessa. Some observers are wondering what change. if any, will occur in Louisiana proration when the new state administration takes office May 12.

Prior to February, and especially in January and December, California was the country's arch over-producing state, showing an excess around 160,000 barrels daily at the turn of the year. Under the voluntary proration plan inaugurated about February 1 and still in effect, however, California has held production fairly close to the Bureau of Mines recommendations. In March the state had an excess of about 27,000 barrels daily. For the week ended April 18 it showed an excess of 20,100 barrels per day.

The Bureau of Mines reported that during the week ended April 11 the nation's crude stocks decreased 1,137,000 barrels, to a total of 311,837,000 barrels. But that decrease was the first following a steady climb of five weeks' duration.

First Quarter Earnings Good

Exclusive of companies operating in the Pacific Coast region, the oil industry enjoyed in the first three months of 1936 the best earnings for that period in several years. One company had the best first quarter results for about 10 years.

The comparatively large earnings reflect the two significant facts that consumption of petroleum products has been running near all-time peak proportions and that prices have been better than a year ago for both crude and refined oils. Gasoline consumption has been setting new records, but fuel oils and kerosene also have been in strong demand. The prices of all the products, wholesale and retail, have been stable at comparatively high levels.

Companies that have reported better earnings in the first three months of this year than in that period last year include: Atlantic Refining Company, Tide Water Associated Oil Company, Plymouth Oil Company, and Texas & Pacific Coal & Oil Company. Better results are indicated also for Standard Oil Company of Ohio, Socony Vacuum Oil Company, Phillips Petroleum Company, The Texas Corporation, and others. Due to the adverse market conditions on the West Coast, Union Oil Company of California had smaller first quarter profit this year than last year.

Second Quarter Opens Auspiciously

Almost a month of the year's second quarter has elapsed, and the earnings situation continues favorable. In fact, it is improved from a national viewpoint, as California markets now are better, with higher wholesale and retail prices prevailing on gasoline. Since the markets promise to hold their own, if not to show additional gains, and since the volume of business normally is higher in the spring and summer, the net profits of the oil companies in the second quarter of 1936 quite likely will be generally gratifying.

Last week brought historic dates in Texas and Oklahoma, two of the "big three" oil producing states. April 21 was the 100th anniversary of the Battle of San Jacinto, fought near the present site of Houston, and ranked as one of the momentous battles in world history. In consequence of the Texans' victory over Mexican forces in that encounter, Texas became a republic and later was admitted as a state. In connection with the annexation of Texas, the war between the United States and Mexico was waged, and about a third of the country's present area was brought within its boundaries: the country from the Sabine River in eastern Texas up to the Rocky Mountains in Colorado and westward to the Pacific. With all this land came much oil. Texas alone now produces 40 percent of the nation's current crude oil production, and more comes from New Mexico.

In Oklahoma the banks were closed April 22 in observance of the anniversary of the Oklahoma settlers' run of 47 years ago. At high noon April 22, 1889, the bugle sounded the signal that released a horde of land seekers on the southern border of Kansas, headed for new homes. The settlers got land, and with it, in some cases, they got oil for themselves and their heirs.

Texas Gas Law in Appeals

In contrast with the Texas oil conservation program, which has withstood repeated attacks in the courts, the state's program for conserving natural gas still is so new that its validity remains yet to be established in the courts. The Texas attorney general's department last week was making preparations to defend the gas conservation law against an attack in the United States Supreme Court. The attack involves a section prohibiting use of sweet gas for carbon black manufacture. The Henderson company, plaintiff, will appeal to the high court, having lost in an attack on the section before a three judge court. The case likely will be heard by the Supreme Court in conjunction with an appeal by the state from a decision of the same court voiding a railroad commission order that sought to force pipe lines to buy gas ratably from producers. While holding that the commission can restrict carbon black manufacture to use of sour gas, the court ruled that ratable takings of gas could not be enforced.

Controversy Over Rail Rates

It is expected in some informed quarters that a group of the Eastern railroads will seek an injunction against the order of the Interstate Commerce Commission, calling for reduced passenger fares on or before June 2. About 10 days ago the commission denied a petition by all but one of the Eastern roads for an 18 month postponement of the effective date and the substitution of experimental compromise rates. If and when the lower rail rates become effective, the oil industry likely will lose some of its market for gasoline, as some travel switches away from motor cars and buses.

Oklahoma City Gas Control

Operators at Oklahoma City field are endeavoring to adopt plans for reducing gas waste in the Wilcox zone. Governor Marland has complained that the waste was occurring within sight of the state capitol. He said he could extend the military zones to prevent the waste if the state corporation commission lacks the authority. Engineers of the operating companies are working on the problem.

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APRIL 19-24, 1937, HOUSTON

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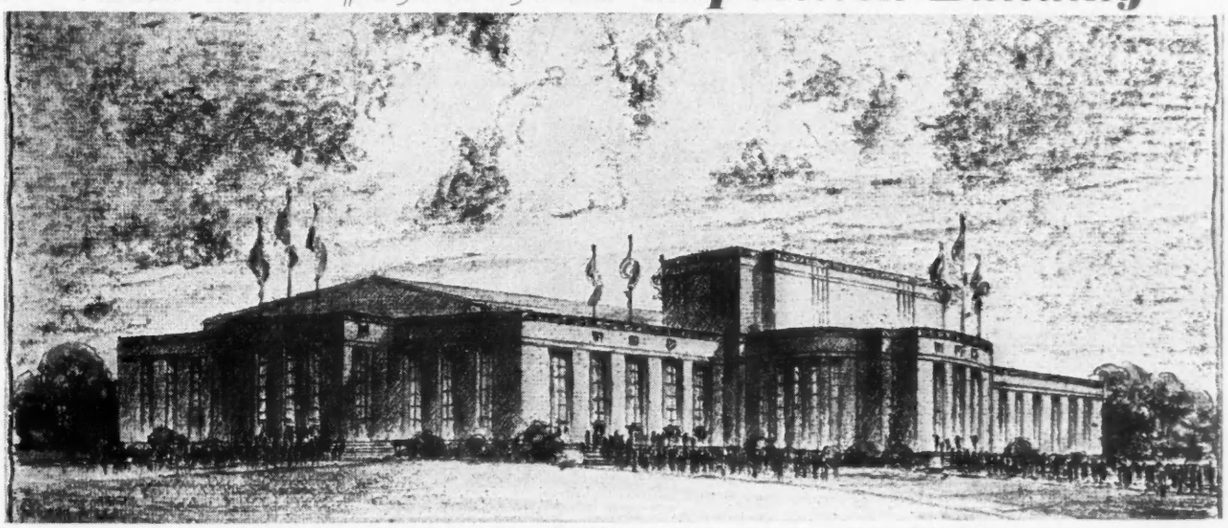

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OIL EQUIPMENT & ENGINEERING EXPOSITION,
Petroleum Building, Houston, Texas.

Gentlemen: We wish to exhibit in the **1937 WORLD OIL SHOW in HOUSTON**—the **only** Oil Exposition to be held during 1937. Please reserve for us the best booth available, and send us your plat and data. We desire a 10'x10' _____ booth; 10'x20' _____ booth; _____ Denote larger booths: _____.

NAME_____

SIGNED BY:_____

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MEN IN THE INDUSTRY'S NEWS

C. R. MINOR of Gulf Refining Company of Louisiana, C. N. Black of Magnolia Petroleum Company, and Charles G. Laskey of Belchic and Laskey, all of Shreveport, were elected vice presidents of the Louisiana-Arkansas division of Mid-Continent Oil & Gas Association at a meeting of the executive committee in Shreveport April 21. Tinsley Gilmer, Humble Oil & Refining Company, Lake Charles, was elected the division's representative on the board of directors of the association.

JOHN A. BROWN, president of Socony-Vacuum Oil Company, New York, headed a group of officials that spent the past week inspecting properties of the Magnolia Petroleum Company, a subsidiary, in Louisiana, Texas and Oklahoma. The party spent Tuesday in Dallas conferring with E. R. Brown, and D. A. Little, chairman of the board and president, respectively, of Magnolia Petroleum Company, then visited recently acquired holdings in the Rodessa field and also properties in the East Texas field. Besides Brown, the visiting group included A. F. Corwin, F. S. Fales and H. F. Sheets, vice presidents; W. F. Burt, manager of refineries; George V. Holton, general counsel; Robert Siegel and B. B. Jennings.

LAWRENCE S. "DOC" McGEE, for many years connected with the scouting and land departments of Carter Oil Company, has been transferred from Tulsa to Shreveport to be head of the land department for Standard Oil Company of Louisiana.

J. J. ZORICHAK, production engineer for Stanolind Oil & Gas Company, discussed, "Water Control in Pumping Wells," at the April meeting of the Tulsa Geological Society held on Monday evening, April 20.

WILTON W. LaRUE, vice president of McCollum Exploration Company, Houston, Texas, is rapidly recovering at the Medical Professional Hospital in Corpus Christi, Texas, where he underwent an operation for appendicitis.

FRED W. TURNER and associates have announced purchase of the interests of J. P. Gordon of Columbus, Ohio, in Gordon Oil Company, one of Michigan's largest independent producing companies. Gordon was the original founder of the company in Ohio. He will retire from the oil industry. Howard D. Atha, former vice president and general manager of the company's Michigan-Ohio operations, has been elected president under the new setup.

L. L. ANDERSON, vice president and general manager of Huasteca Petroleum Company, has returned to headquarters in Mexico City after a trip to New York.

ROBERT M. WHITESIDE, who recently resigned from the geological department of Shell Petroleum Corporation, has joined the W. A. Delaney Interests and will make his headquarters in Ada, Oklahoma.

BERT RIDGEWAY has been transferred from Wichita, Kansas, by Empire Oil Refining Company, to Mt. Pleasant, Michigan, to succeed Ray Hunt, in charge of Michigan land and producing divisions. Hunt recently resigned to accept a position as geologist and vice president of Cry-Den Oil Company.

C. E. "CLIFF" SAVAGE, assistant chief scout for Carter Oil Company, was due late in the week to be removed from a plaster cast in which he has reposed during the past seven weeks. His leg was broken near the hip joint in a fall sustained while scouting a Garvin County wildcat test.

J. W. SAVERLINE, superintendent in the Healdton, Oklahoma, district for Twin State Oil Company, has received a pin in recognition of 35 years of service with Sun Oil Company subsidiary.

M. E. MONTROSE, Oklahoma manager for Lane-Wells Company of Los Angeles, has returned to headquarters in Oklahoma City after a business trip to eastern oil centers.

DIED:

DR. E. R. RIGGS, 62, discoverer of several shallow oil fields in the Young County section of North Texas district, died April 19 at his residence in Graham, Texas. He carried on active operations in northern Young County for a number of years, but the past three years was spent in semi-retirement because of failing health. Survivors include his widow; a daughter and three sons.

W. C. KOBEL, erecting engineer for Cooper-Bessemer Corporation and for the past 14 years a resident of Tulsa, died on Sunday, April 19, after an illness of long duration. He was born in Urban, Pa., and had followed the oil development of the East before going to Minnesota and then to Oklahoma. He was 53 years of age.

ADDISON H. GIBSON, president of Gibson-Zahniser Oil Corporation and Galvez Oil Corporation, died of pneumonia April 19, at Tulsa. He was 75 years old.

J. ALEX STEPHENSON, 90, died at Depew, Oklahoma, April 20. Stephenson, a drilling contractor, was credited with drilling the third commercial oil well in the United States, near Oil Creek, Pennsylvania. The well produced 20 barrels from a depth of 200 feet. Stephenson was honored by being selected the first "grand old man" of the industry at the International Petroleum Exposition several years ago.

L. G. PUTNAM, chief geologist of Inyaminga Petroleum Company, was killed in an airplane crash while en route to a directors meeting in Johannesburg, South Africa, March 25, according to a communication received April 20 by THE OIL WEEKLY from C. R. Smith, drilling superintendent for the company. The plane crashed near the small town of Guelo, 80 miles from Bulawayo in Southern Rhodesia. Natives who saw the accident reported the plane collapsed while flying.

HENRY E. OSBURN, age 64 years, for 18 years a member of the engineering department of Standard Oil Company of California, having retired about six months ago, died at his home in Los Angeles April 19, and funeral services were held April 21. Prior to accepting employment with Standard Oil Company, Osburn was roadmaster with the Southern Pacific Railroad in California, serving that company for 21 years. He is survived by his widow, two daughters and one brother.

CHARLES E. RATHBURN, Oil Well Supply Company, died in Denver, Colorado on Monday, April 13, following a short illness. Ten days previously he had visited friends in Tulsa, where he formerly lived for many years. Prior to his transfer to the Rocky Mountain district he had been cable tool salesman in the Tulsa district. He was 58 years of age.

KARL ETIENNE YOUNG, 32, geologist and independent oil operator of Houston, died April 20 at a hospital in Houston. His death was the result of an injury sustained April 1 when an air compressor exploded. At that time he was supervising drilling operations at an oil test near Humble. A sliver of steel from the shattered compressor broke his collar bone and penetrated his chest. Young formerly was chief geologist of Rycade Oil Corporation at Houston, and later was chief geologist for Union Sulphur Company at Sulphur, Louisiana. In 1930 he became associated with H. W. Lowrie, Jr., as a partner in the firm of Lowrie & Young, independent oil operators. In 1935 he began operating alone as Karl E. Young.

JOHN A. MOODY, 43, for the past 6 years an independent oil operator in Texas, died in San Antonio, April 18. He was a native of Nevada, Texas. In June, 1920, Moody went to Mexico, and was connected with Mexican Gulf Oil Company, in various capacities in warehouse and pipe line departments, until November, 1928, when he was stricken with tuberculosis. He returned to Texas and spent two years at Kerrville. Interment was at Nevada on April 20.

THOMAS BAILEY, auditor of Marland Oil Company of Mexico, died of pneumonia at his home in Monterrey, Mexico, on April 8. He was a native of London, England. Bailey went to Mexico in 1924, and for several years was auditor of Cia. Transcontinental de Petroleo, S. A. (subsidiary of Standard Oil Company of New Jersey), before that company was merged with Huasteca Petroleum Company. About 5 years ago he became associated with Marland interests in Mexico. Interment was at Monterrey April 9.

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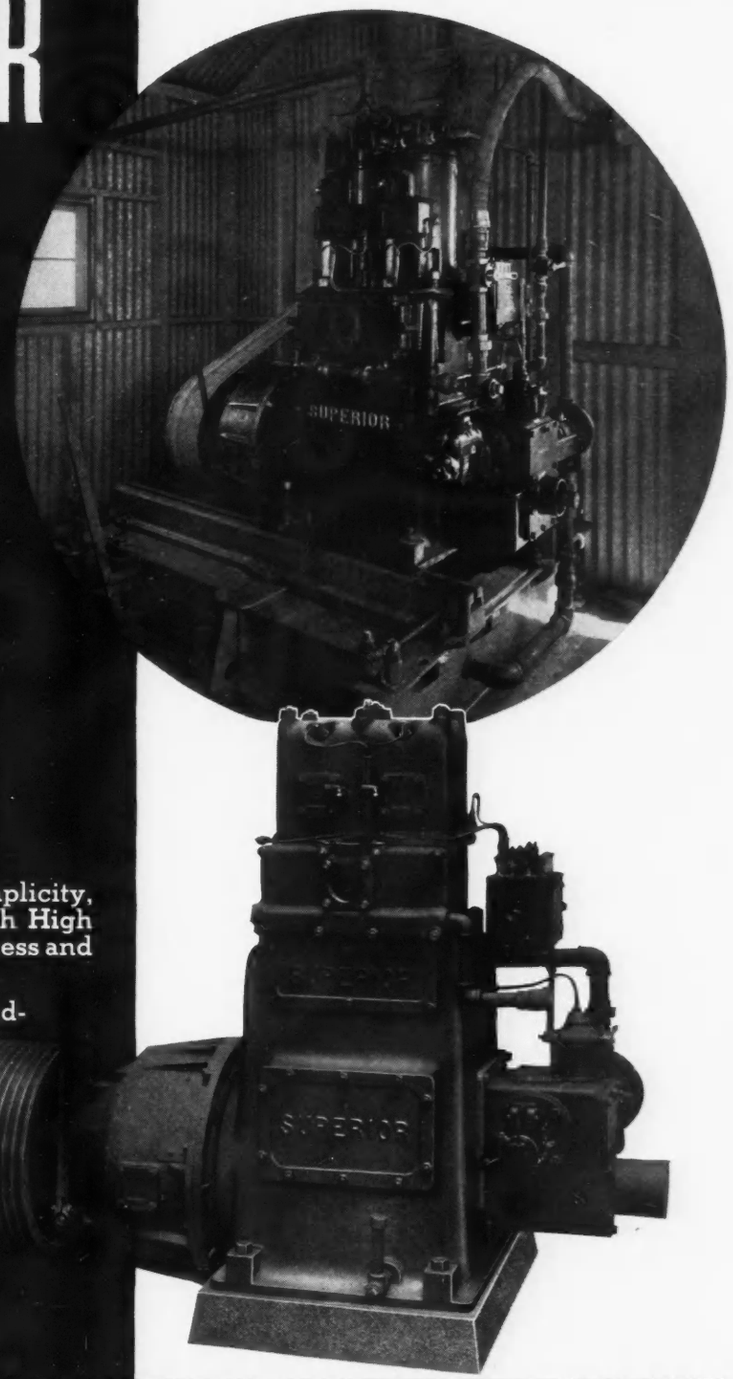

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Design incorporates manifold advantages of crosshead construction—large shaft and bearings—splash and flood lubrication and force feed to cylinders... Wide power and speed range is ideal for Geared Pumping Units, Powers and other heavy duty service.

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GRAY-KEROTEST

Gray Tool Co. Houston Texas

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CHANGES IN BOTH EQUIPMENT AND OPERATING METHODS REDUCE

Production Corrosion

By BRAD MILLS, Associate Editor

DAMAGE from corrosion of production equipment in the sour oil fields of West Texas and Southeast New Mexico has been reduced materially by several companies that have made an extensive study of the action of hydrogen sulphide and salt water under various operating conditions. Although corrosion has increased operating costs in all sour oil fields, it does not represent a definite barrier to profitable production of oil in areas that otherwise might be produced at a profit. Both changes in equipment and operating methods have played important parts in reduction of damage from corrosion. Development of special alloys, less severe use of equipment that suffers from fatigue, use of wood tanks in the most troublesome areas, and more careful handling of salt water have been important factors in a program that has increased the service life of all types of equipment.

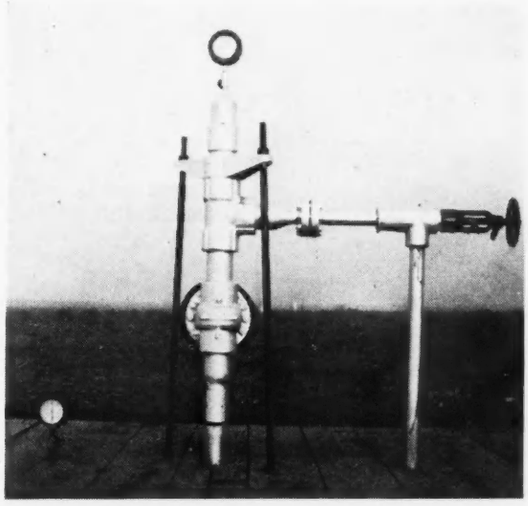
In combating corrosion, the problem is attacked as an electro-chemical reaction that causes the disintegration of iron. Whether the reaction is mostly chemical or electrical is not as important as the fact that it often is possible to check this wasting away of metal by the elimination or mitigation of factors causing the loss. In a strictly non-technical form, corrosion may be regarded as the rotting, wasting away, rusting or disintegration of iron. It is simply the tendency of the metal to revert to its original state, and is most commonly referred to as a form of rust. Some force is required, however, to bring this disintegration about, since a metal will corrode in a fixed locality or environment only to the extent it reacts with some medium of constituent.

A great deal has been learned about corrosion, or the "driving force" of the reaction that often reduces metal to rust in a short time. Corrosion in air, water or soil starts with exposure and continues without interruption, but the intensity of this wasting away is dependent upon numerous factors well known to the average chemist or engineer.

All forms of corrosion are closely related, although the corroding mediums may differ. Common sea water contains about three percent sodium chloride, with varying amounts of calcium and magnesium sulphates and chlorides. Brines produced with crude oil in several West Texas fields are contaminated frequently with hydrogen sulphide, a combination that increases greatly the rate of corrosion of metals. Oxygen and hydrogen sulphide combine to form the corroding medium causing most of the damage in West Texas oil fields.

Production equipment affected most by corrosion includes sucker rods, pumps, tubing, casing, Christmas tree connections, flow lines, traps and tanks. All ordinary iron and steel are subject to attack by corrosion, but these metals should not be blamed for their limitations. Experience has proved that certain grades of iron or steel may be used to advantage under various conditions, although in a number of instances the mild steels and irons do not possess the necessary strength to withstand the stresses and strains imposed. Steel containing a high percentage of certain alloys may be used to advantage under many operating conditions, but its cost would be prohibitive when used in the manufacture of heavy equipment intended for small producing wells.

Corrosion in the Church-Fields-McElroy area, Crane and Upton counties, has added to all phases of operating costs. Oil and gas produced in this district contain a high percentage of hydrogen sulphide, and all types of production are subject to attack from corrosion. Progess made during the past two years has sharply reduced corrosion losses, however, and the average service life of several equipment items has been more than doubled. Changes in both equipment design and operating methods have been effective in the reduction of replacement costs.



Simple flow connections and quality equipment feature operations in the Eunice, New Mexico, field.

Sucker Rod Studies

The very short service life of sucker rods in these sour oil fields caused several of the largest operating companies to seek a reduction in replacements of this equipment item. A study of failures usually showed that

corrosion had played a part. The fact that rod strings often parted where only a small pit occurred gave the first clue that most of the trouble was caused from corrosion fatigue, and not from straight corrosion. A further study proved that the rod strings had been too heavily loaded for use in lifting sour crude oil and water. The rods functioned satisfactorily when new, but the slightest attack from corrosion weakened the rod string and led to trouble. Several of the rod strings showed little wear, but a more careful examination of the break usually revealed a corrosive pit that had encouraged trouble.

Lower average well production established by proration has reduced failures from fatigue in sucker rods. The present daily load is only a fraction of the load lifted when wells were required to pump at their maximum rate. The heavy duty imposed on sucker rods was undoubtedly one of the chief accelerating agents of corrosion. The constant strain invited attack at points in the rod string receiving abuse. Experience in these sour oil fields indicated that only the shallowest nick or pit was required to cause failure in rod strings that were heavily loaded. The heavy loads naturally contributed to stresses and strains that weakened the rod strings, even in the absence of corrosion.

When wells were pumped at capacity rates in several fields, the sucker rods gave less than a year of service life. The rods of today are of better quality and much more rust-resistant than those used several years ago, but their greater service life may be attributed chiefly to reduced well loads. Larger rods are also being used, a change that has reduced fatigue failures in the deeper and larger wells. Where a rod string possesses a high margin of strength, small pits do not cause serious trouble. It is in the small, overtaxed rod strings that corrosion fatigue occurs. Tests showed that a rod string working near its limit broke immediately when a small notch was filed to represent a corrosive pit.

Corrosion has been very bad in two or three fields recently opened in West Texas, but replacement costs have been reduced by the use of equipment having a high strength factor. A string of sucker rods gave a great deal of trouble and had to be replaced in less than 90 days. These small fields show a much higher percentage of hydrogen sulphide and salt water than several of the more important producing areas.

Tubing strings in the average West Texas field are affected seriously by corrosion only near the bottom of the hole. A few of the bottom joints above the mud anchor often corrode and give trouble in a very short time. Accumulation of salt water in the bottom of the hole accounts for corrosion at this level in most of the producers.

Galvanized wrought iron tubing is being used with considerable success to check corrosion. A few joints of this type tubing are run on bottom of the conventional string, and where the water level is high, a larger number of joints are run.

Steel flow tanks are seriously affected by corrosion in most of the sour oil fields. The decks of the ordinary steel tank often corroded through in about one year, while the bottoms had an average service life of less than 18 months. Some of the steel tanks showed a much better service record, however, and in fields producing only a small percentage of hydrogen sulphide, the service life of the ordinary steel tank has been satisfactory. Where tank tops had to be replaced every year and the bottoms every 18 months, the average service life of the tank sides was about four years.

Aluminum tops and bottoms have been used in an experimental manner.

Galvanized wrought iron tanks are being used in a number of fields, but they have not been in service long enough to indicate their average service life under bad corrosive conditions. They apparently represent a distinct improvement over the older types, however. It is believed by several operators that galvanized tanks will give uninterrupted service so long as the zinc coating remains intact. Knocking down and rough handling that damages the zinc coating may make such tanks susceptible to attack from corrosion where the base metal is exposed.

Where ordinary steel tanks have been used in the most corrosive sections, it has been very difficult to check corrosion of roofs. Moisture combining with the hydrogen sulphide in the gas forms a very deadly combination. Fresh water has been kept in tank bottoms to check corrosion, and in a number of instances the service life of this part of the tanks has been more than doubled.

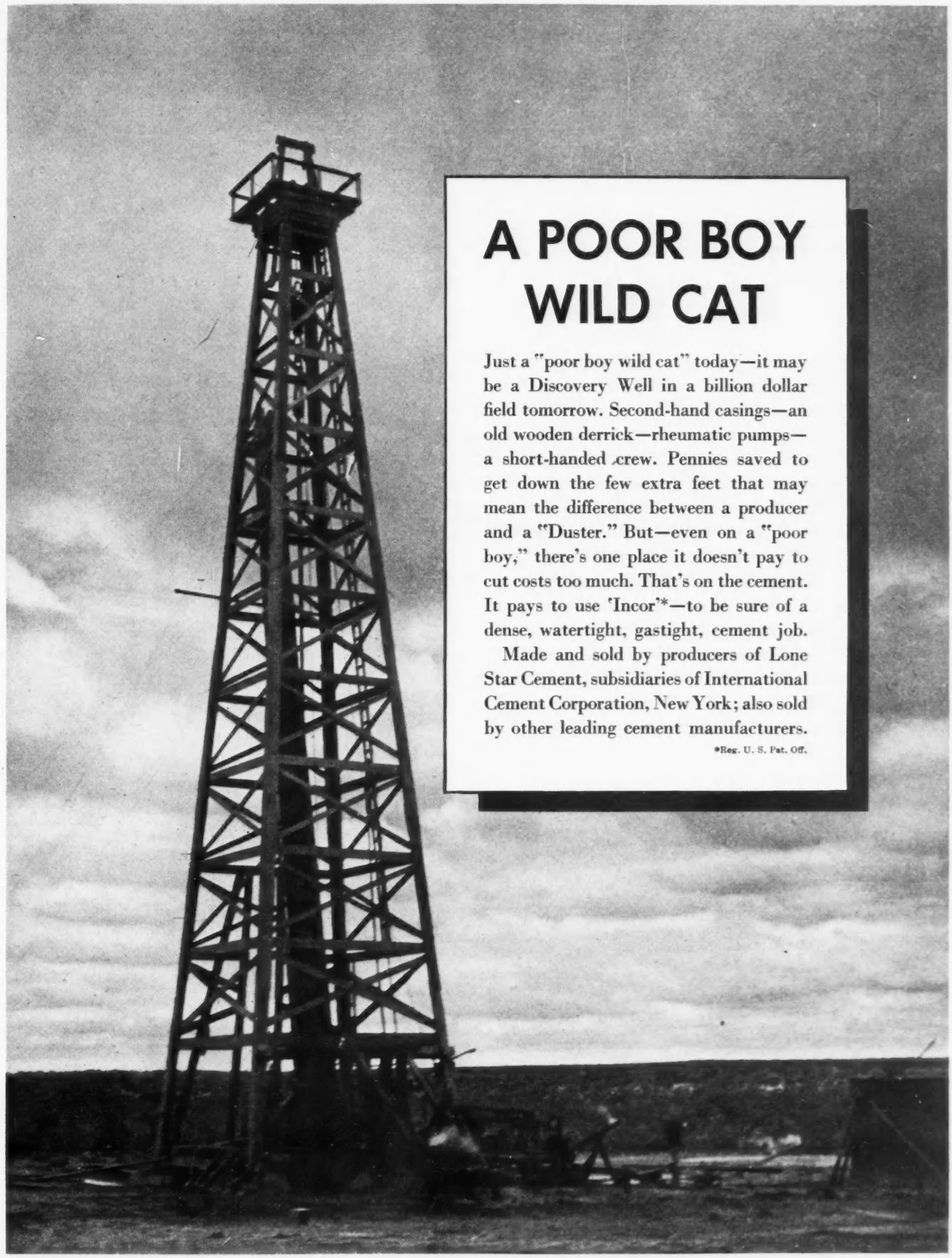
Wood tanks have been adopted by several large operators in a number of fields. These flow tanks are mostly the 500-barrel type, and are erected with a slight barrel shape to add strength. Steel hoops are used on the outside, but the steel braces on the inside are encased in redwood. The sides, tops and bottoms usually are made of redwood, and no metal comes in contact with the contents of the tank. The tanks are erected in batteries of different sizes, with the 16-tank battery being common in Southeast New Mexico.

Special paints of an asphaltic nature have been used extensively to check corrosion of ordinary steel tanks. These paints are used to coat the tanks, and several companies have approved the practice.

Corrosion in separators and traps has caused no end of trouble in sour oil fields. The bottoms of separators often corrode through in a year, but the tops and sides have a much longer service life. Accumulation of salt water in the bottoms accounts for the rapid wasting away of metal. One company has been experimenting with stainless steel bottoms and expects to obtain a longer service life for separators. Vapors in separators do not have the same effect on the tops as in flow tanks, since the movement of fluid and the turbulence is much greater.

Use of special alloys in the manufacture of balls and seats and other pump parts has sharply reduced corrosion losses in all sour oil fields. Manufacturers have co-operated with the oil companies in the development of such equipment. Use of these very expensive alloys is justified in the manufacture of pump parts, while in the manufacture of sucker rods, tubing and casing, the cost of such alloys would be prohibitive. It is very essential that pump parts controlling the entry of the fluid into the tubing be made of metal that does not corrode or pit readily.

Christmas tree connections, particularly valves and cocks that control the flow of fluid from the hole, have been affected by the production of sour oil and gas. Some of the early type valve seats pitted quickly and became unserviceable in a short


A POOR BOY
WILD CAT
Just a "poor boy wild cat" today—it may be a Discovery Well in a billion dollar field tomorrow. Second-hand casings—an old wooden derrick—rheumatic pumps—a short-handed crew. Pennies saved to get down the few extra feet that may mean the difference between a producer and a "Duster." But—even on a "poor boy," there's one place it doesn't pay to cut costs too much. That's on the cement. It pays to use 'Incor'*—to be sure of a dense, watertight, gastight, cement job.
Made and sold by producers of Lone Star Cement, subsidiaries of International Cement Corporation, New York; also sold by other leading cement manufacturers.
*Reg. U. S. Pat. Off.
'INCOR' 24-Hour Cement

time. Use of special alloys has eliminated most of this trouble.

Casing has not given as much trouble from corrosion as might be expected, but during the past year more than a dozen strings have shown signs of leaking. It is believed that the next two or three years will show an increasing number of leaky casing strings. When leaks develop, they usually are small enough to permit operation of the well with a slightly higher percentage of water. The few casing strings pulled, showed heavy corrosion near bottom. It is believed that a large number of increases in water production has been caused by leaky casing. Most of the corrosion in casing has been near the bottom of the string. Some of the casing pulled for various reasons showed an almost new condition near the top of the string.

Tubing in the Hobbs, New Mexico, field has caused some trouble, and as water increases, corrosion will become more prevalent. A tubing string was pulled recently to determine the poor performance of the well. The tubing showed many holes at several levels, and above the packer for 1000 feet pitting was very deep. Near the top of the hole the tubing looked new, while the small amount of tubing below the packer showed no corrosion. Only the portion of the tubing in direct contact with salt water showed damage from corrosion.

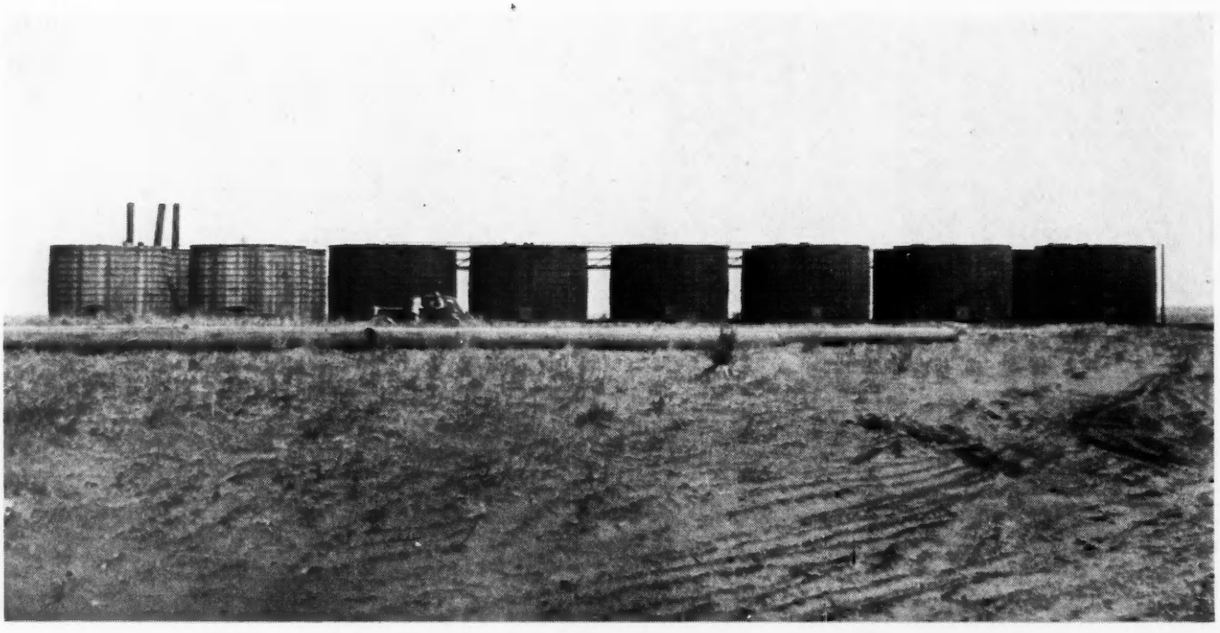
Moisture Must Be Present

A large operator some time ago conducted a series of experiments to determine the relative importance of moisture, oxygen, and hydrogen sulphide in the corrosion of pipe and other equipment. It was necessary in the course of these experiments to confine observations to internal corrosion. During these tests it was proved that moisture, or water, must be present in all forms of corrosion. Oxygen, which is the chief accelerating medium, is obviously present in the water. A number of short pipe sections were used, and after one year the inside of each section was examined. Some of the pipe sections contained only crude oil and hydrogen sulphide, while others contained crude oil, hydrogen sulphide, and salt water.

In the course of these experiments a number of combinations were used. Some of the short pipe sections contained straight West Texas crude oil, free from water; others contained West Texas crude oil and iron sulphide scale; and a number contained sour West Texas oil, iron sulphide scale and salt water. The presence or importance of free oxygen was not considered during these tests, since it was difficult to determine its volume or significance.

All samples were tightly closed, and the inside of the pipe sections was examined after a year or more. It was found that the sections containing sour West Texas that was free from water had not corroded. The sections containing West Texas oil and iron sulphide scale also had failed to show damage from corrosion. The pipe sections containing sour West Texas crude oil, iron sulphide scale and salt water showed serious damage from corrosion.

Some of the sour oil fields have been producing only a small percentage of salt water along with enough hydrogen sulphide to give trouble under less favorable water conditions. As the water cut increases, corrosion in these fields will increase. Hydrogen sulphide crude gives little trouble unless accompanied by salt water. Sucker rods, tubing and casing in wells that have given little trouble will take on a more troublesome aspect as salt water encroaches in several fields. Tubing and casing strings that have been affected near bottom will show additional damage from corrosion as the water level rises.



A battery of 16 wood tanks recently erected in the Eunice, New Mexico, field.

Micromagnetic Surveys

GULF COAST STRUCTURES MAY BE OUTLINED BY THIS NEW METHOD

By W. P. JENNY
Consulting Geologist and Geophysicist

IF the torsion balance of 1925 had measured the gravimetric gradient with an accuracy of only plus or minus 10 Eoetvoes, any geophysicist trying to introduce a new and more accurate torsion balance method today would encounter considerable opposition, because from large experience it would be general knowledge by now that while the *torsion balance* gave good results on shallow domes *it* utterly failed to prove up any of the deep-seated domes.

Even if the geophysicist could prove by actual surveys on known deep domes that his new and improved torsion balance method gave very definite gradient pictures above such structures, he would meet with little credulity, because these areas "had all been *torsion balanced* in former years, and not the slightest indication of structure could be discovered."

This opposition, fictive for the torsion balance method, is only too real in the case of the magnetic method, even though, as the result of years of experience, this method has recently been revolutionized in a threefold way:

1. The magnetometer has been greatly improved.

2. The field technique has been improved to such a point that it is now possible to measure the magnetic field with an accuracy of plus or minus 2 gammas as compared with the average accuracy in former years of from plus or minus 10 to plus or minus 25 gammas.

3. The basic assumptions for the interpretation of magnetic anomalies have been changed completely. In former years we thought that all magnetic anomalies were caused by the basement or shallow igneous rocks. Today we know that there exists sufficient difference in the magnetic susceptibility within the sedimentary columns, to produce noticeable magnetic anomalies

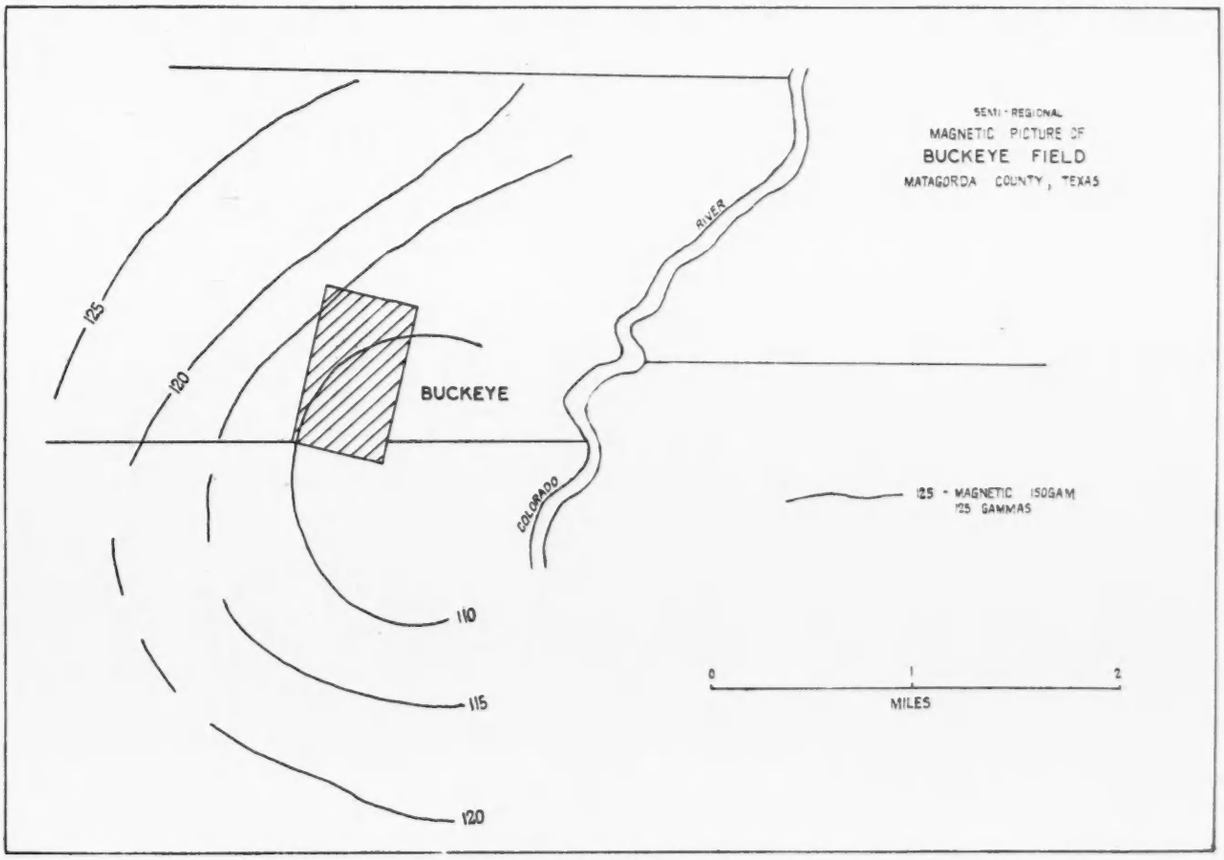


FIGURE 1

above structures of commercial interest. Especially in the Gulf Coast and in parts of California, where the basement is burried beneath a four to six miles thick blanket of sediments, it stands to reason that any localized magnetic anomaly must of necessity originate within the shallower sediments.

In recent years a number of successful magnetic surveys have become known in the Gulf Coast. The deep seated dome at Buckeye, Matagorda County, Texas, is a magnetic discovery by F. E. Heatley. The present writer has made a magnetic survey of this general area in 1934. Figure 1 shows the semi-regional magnetic isogams for the Buckeye area. A semi-regional closure of from 10 to 15 gammas exists, but more detailed work in the area of the wells is no more possible on account of the magnetic effect of the casings.

E. G. Nicar has published a magnetic isogam map for the Fannett Dome, which shows a 25 gamma local anomaly above this shallow dome. The data for the enclosed magnetic profile (Figure 2) were taken from Nicar's map along the north and south highway 125.

W. M. Barret has published similar profiles for the Anse La Butte and Port Barre salt domes in Louisiana.

The writer made a magnetic survey of the Kittrell area, Houston County, Texas, in October, 1934, shortly after the discovery of the field. From the magnetic picture of the area (Figure 3) it was concluded that the structure should in all probability lie to the southeast of the discovery well. This conclusion was diametrically opposed to the then generally assumed southwest-northeasterly structural trend, which, however, was soon disproved by a considerable number of dry holes. In close agreement with the magnetic predictions, a well later encountered the salt to the southeast of the discovery well.

Further improvements in the field technique have led to such an increase in the accuracy of magnetic surveys that much more subtle problems could gradually be attacked.

Figure 4 shows a north-south micromagnetic profile across a torsion balance prospect in the Gulf Coast. The magnetic profile at torsion balance station 7 clearly indicates a sudden break, which must be interpreted as a fault. This fault is supported by the reversed gradient at station 8.

Figure 5 shows the micromagnetic isogams on another torsion balance prospect in the Gulf Coast. The area, which is interpreted as structurally high from the magnetic data coincides fairly well with the torsion balance minimum and the swing of the magnetically indicated depressions around the minimum strongly suggests a rim-syncline.

Figure 6 gives two micromagnetic profiles across the northern extension of the Anahuac field, Chambers County, Texas. The profiles show very definite areas of local anomalies and a fault at the northeast corner of the Mason-McCarthy tract. From the two profiles shown it is clear that the northern extension of Anahuac, although missed by the torsion balance and seismic methods, could not possibly have been overlooked by micromagnetics, if it had not previously been discovered mainly on the strength of surface evidence. The fault in the northern profile could not be located in the southern profile along the highway. This magnetic prediction has by now been proved by the Knowles 2 well.

Figure 7 shows the results of a preliminary survey of the western portion of the Amelia structure, Jefferson County, Texas. The west-east profile indicates a fault and depression to the east of the Broussard Trust 1 well. The regional dip between the Willerton and the McCarthy wells is indicated by the westerly micromagnetic profile and a number of local disturbances between these two wells and along the easterly profile are clearly noticeable.

In studying the micromagnetic profiles at Amelia and

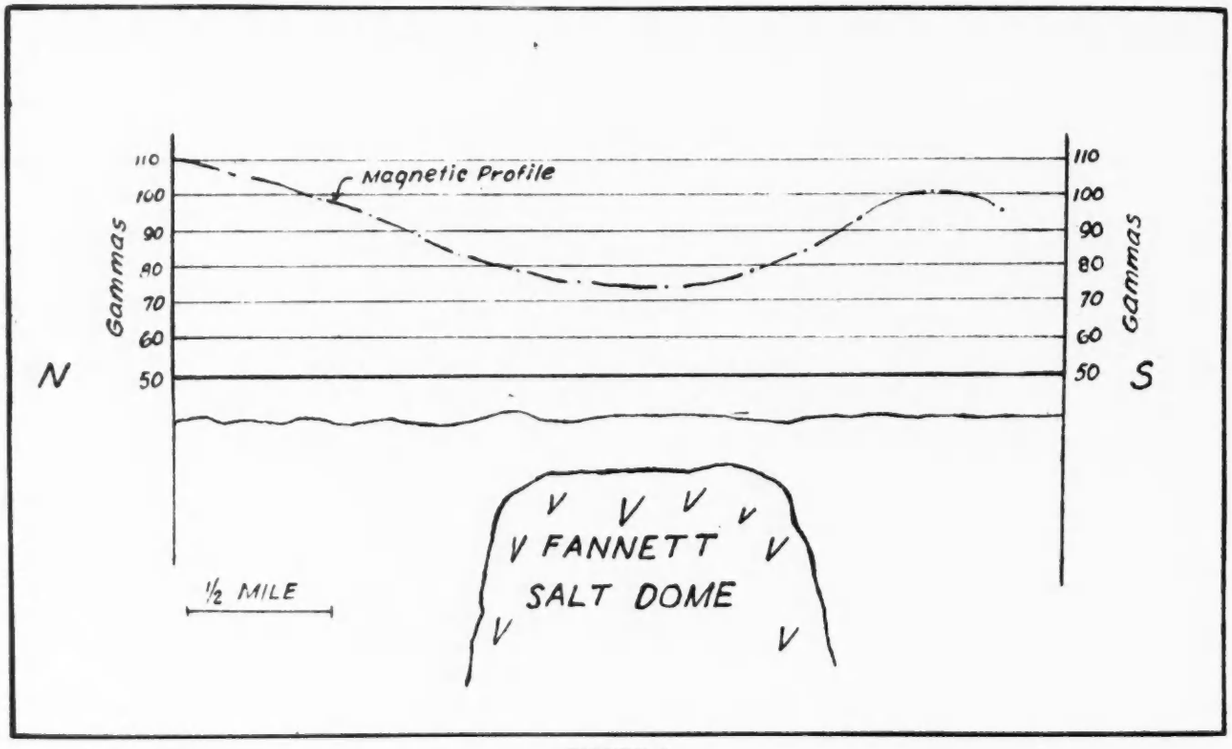
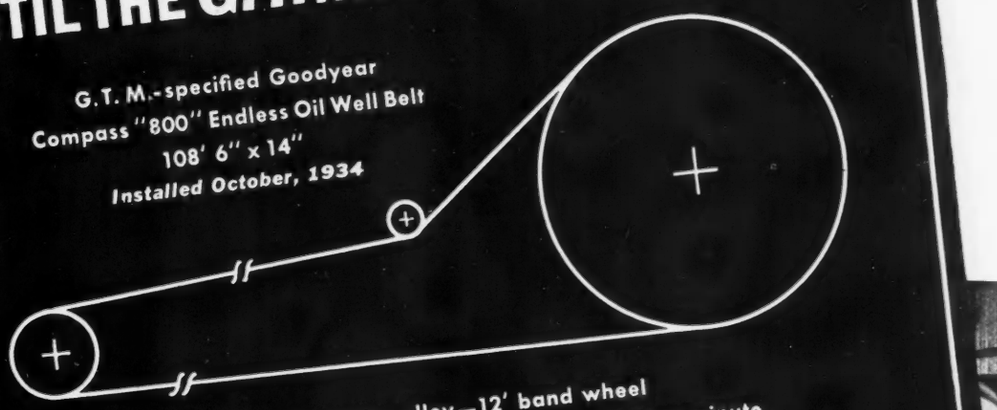
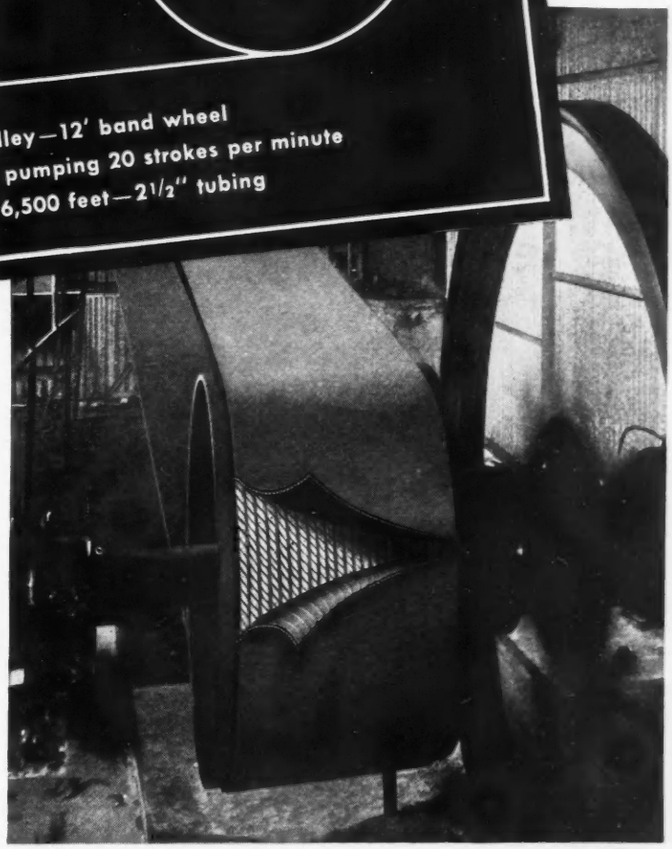


FIGURE 2
Magnetic Profile for Fannett Dome, Jefferson County, Texas. (Data from Nicar's isogam map.)

IT LICKED EVERY BELT UNTIL THE G.T.M. SAID "COMPASS"


G.T.M.-specified Goodyear
Compass "800" Endless Oil Well Belt
108' 6" x 14"
Installed October, 1934
18" clutch pulley—12' band wheel
2 cycle, 50 h.p. engine pumping 20 strokes per minute
Depth of well: 6,500 feet—2½" tubing



THIS Oklahoma City beam drive is a tough pull, as you can see from the blueprint made by the G.T.M.—Goodyear Technical Man. Several heavy ply belts had been put on it—but every one had to be discarded in *six to eight months* because of ply-separation. *They just couldn't take it!*

The G.T.M. specified a Goodyear COMPASS "800" Endless Cord Oil Well Belt, 108' 6" long x 14" wide, double deck construction. Installed in October, 1934, this belt has not stretched in 18 months' service—*has never been taken up—is still in perfect condition after delivering more than twice the service of previous belts!*

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COMPASS cover cut away to show how *endless*, stretchless heavy rope-cords carry the load. There are no plies to separate—no weakening splice!

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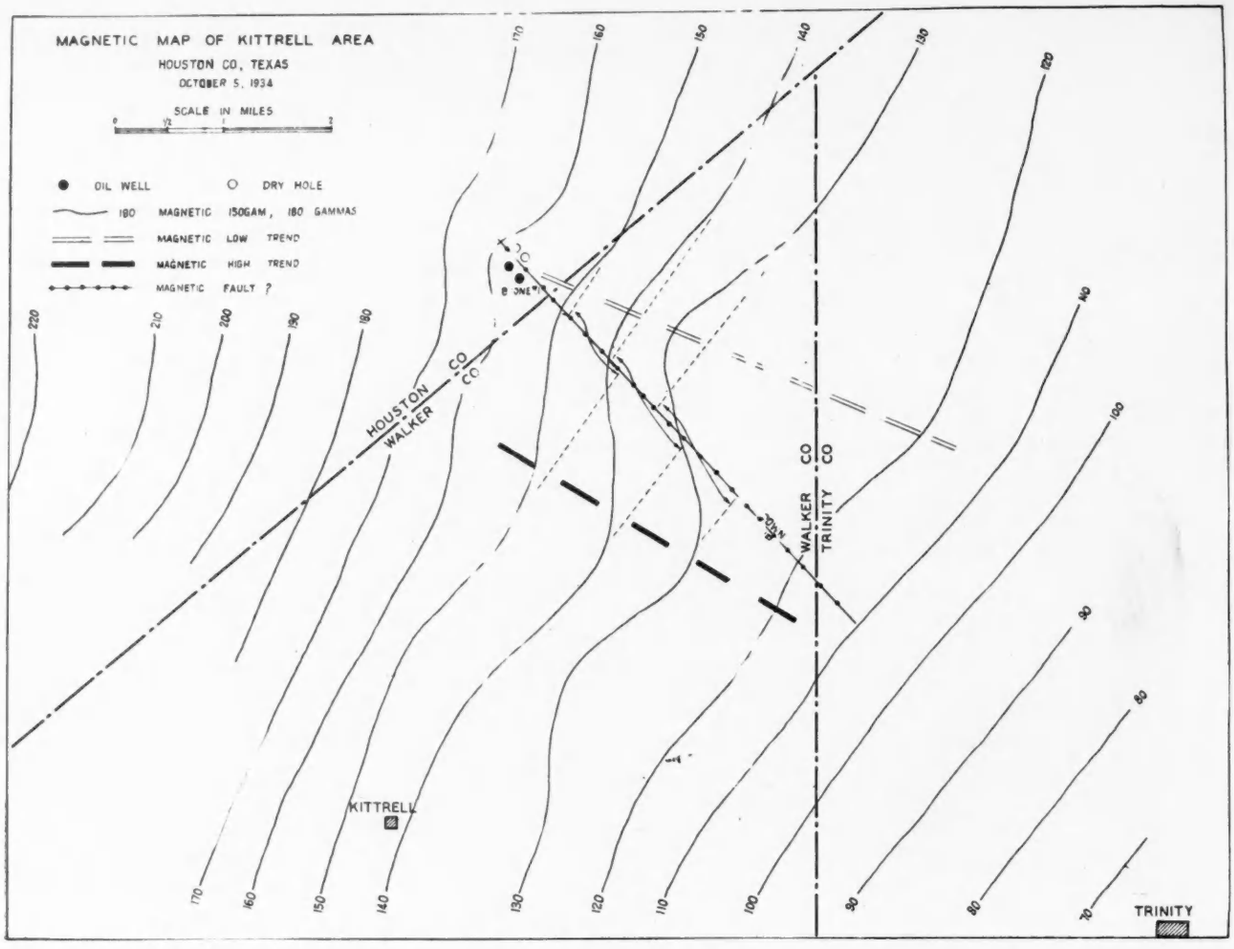


FIGURE 3

Anahuac it should, however, be realized that, especially in the case of local structural conditions, a magnetic high does not necessarily indicate a structural high, neither does a magnetic low of necessity indicate a structural low. However, through long experience the geophysicist can by now interpret the magnetic data into terms of structure with the same degree of accuracy and certainty as he can interpret structure from other geophysical data.

In Figure 8 a comparison of a magnetic profile with the top of the Hockleyensis is made on a north-south cross section through the New Waverly area, Walker

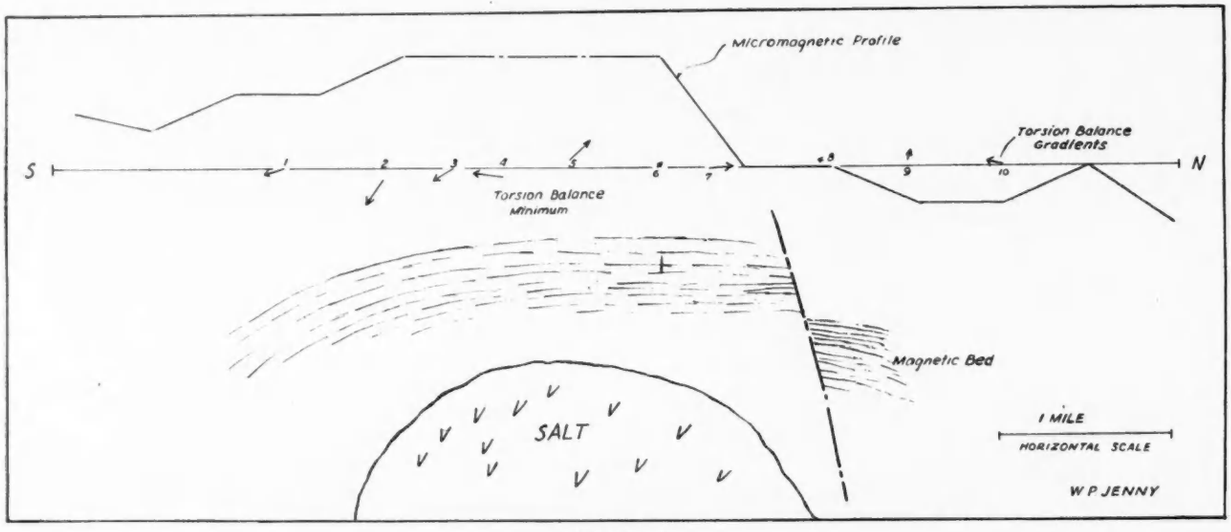
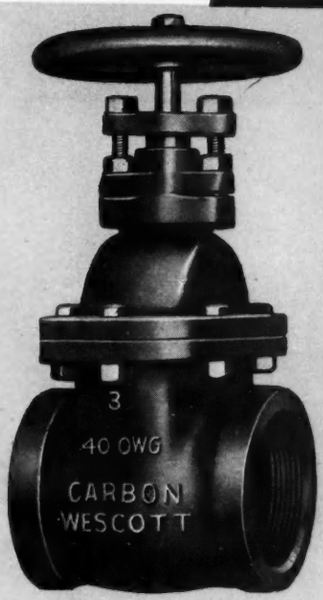


FIGURE 4
Micromagnetic and torsion balance through a Gulf Coast prospect.

Cast Steel Choke Valve

WESTCOTT VALVES and Christmas Tree FITTINGS



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County, Texas. The magnetic profile was constructed in August, 1935; the Bradley and Johnson wells were drilled early in 1936. From the close agreement of their Hockley tops with the magnetic predictions, the writer concludes that a fair chance exists for the magnetically predicted closure to the north. The torsion balance minimum on which the Cavill well was drilled was interpreted originally as a salt uplift but is definitely indicated as a depression by the magnetic profile and the Johnson well. From drill stem tests the Cockfield appears, however, to be a fresh water sand that far up dip and the good oil shows in that sand as obtained by the wells north of the Cavill well might indicate that oil has migrated into the Cockfield through the magnetically suspected faults from deeper sands.

The writer did not deem it advisable to enter into a detailed discussion of the intricacies of the field work and interpretation at each of the above discussed surveys. However, he thinks that the facts presented offer conclusive proof that Gulf Coastal structures can actually be outlined and quantitatively interpreted by the micromagnetic method.

From comparative experience with other geophysical methods the writer is convinced that, on the average, a properly conducted and interpreted micromagnetic survey has as much resolving power as other geophysical surveys, and in as much as the location of faults in particular is concerned the resolving power of a micromagnetic survey is at present surpassed only by clear cut surface evidence or by the drill.

With all due respect to the achievements of the ge-

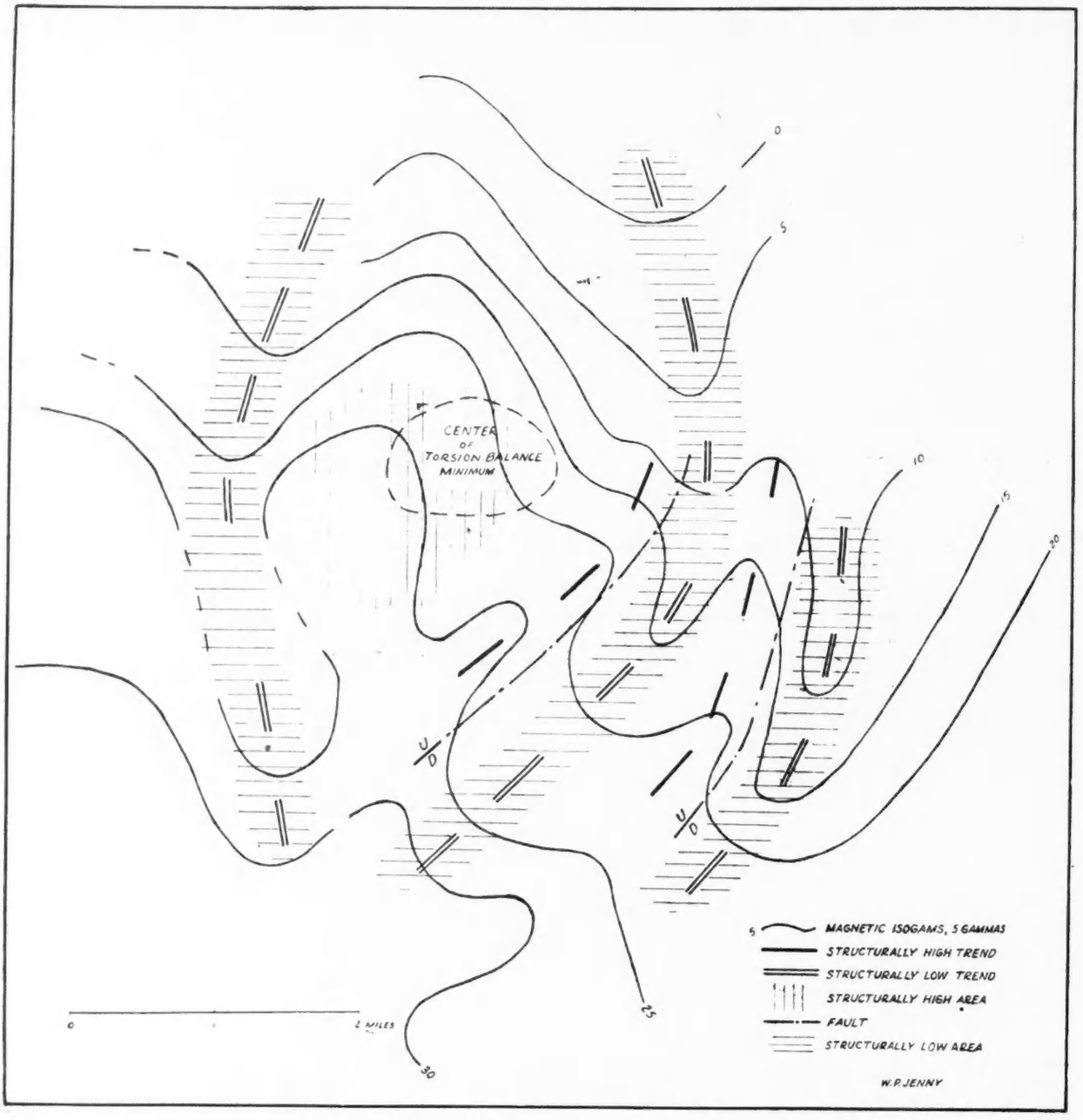

FIGURE 5
Micromagnetic isogams in the area of a torsion balance prospect in the Gulf Coast.

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Seismograph Exploration

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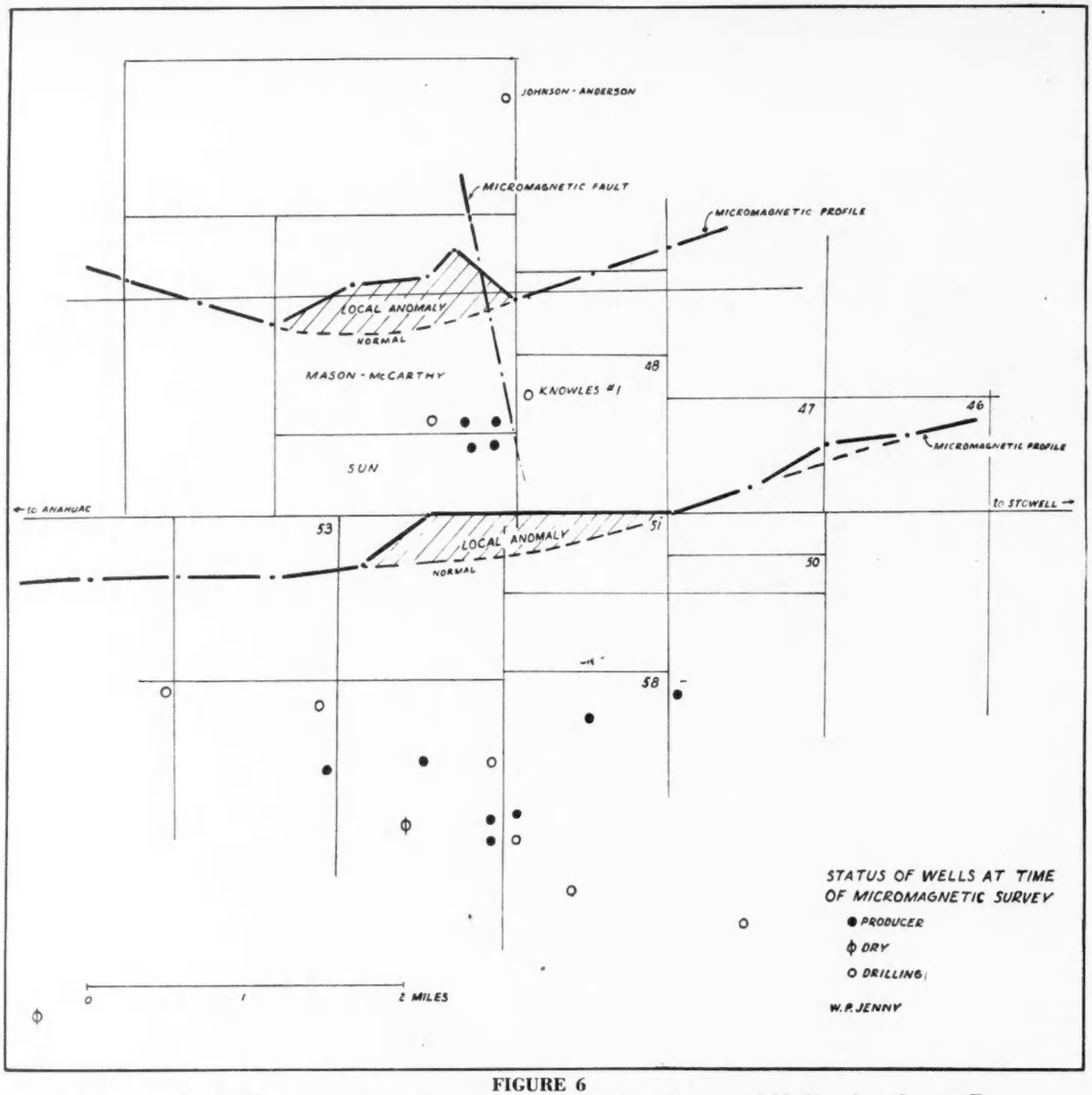

FIGURE 6
Micromagnetic profiles across the northern extension area of the Anahuac field, Chambers County, Texas

ophysicist, we should always realize that reliable surface evidences may contain more resolving power than the combined results of geophysical methods.

In conclusion, the writer wishes to express his indebtedness to his friends for their courtesy in releasing the above data for publication.

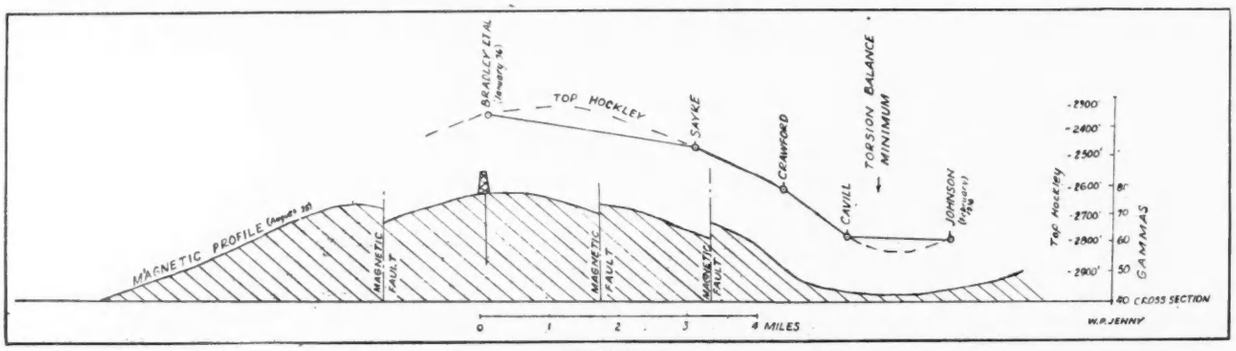

FIGURE 7
Preliminary micromagnetic survey of western Amelia structure, Jefferson County, Texas

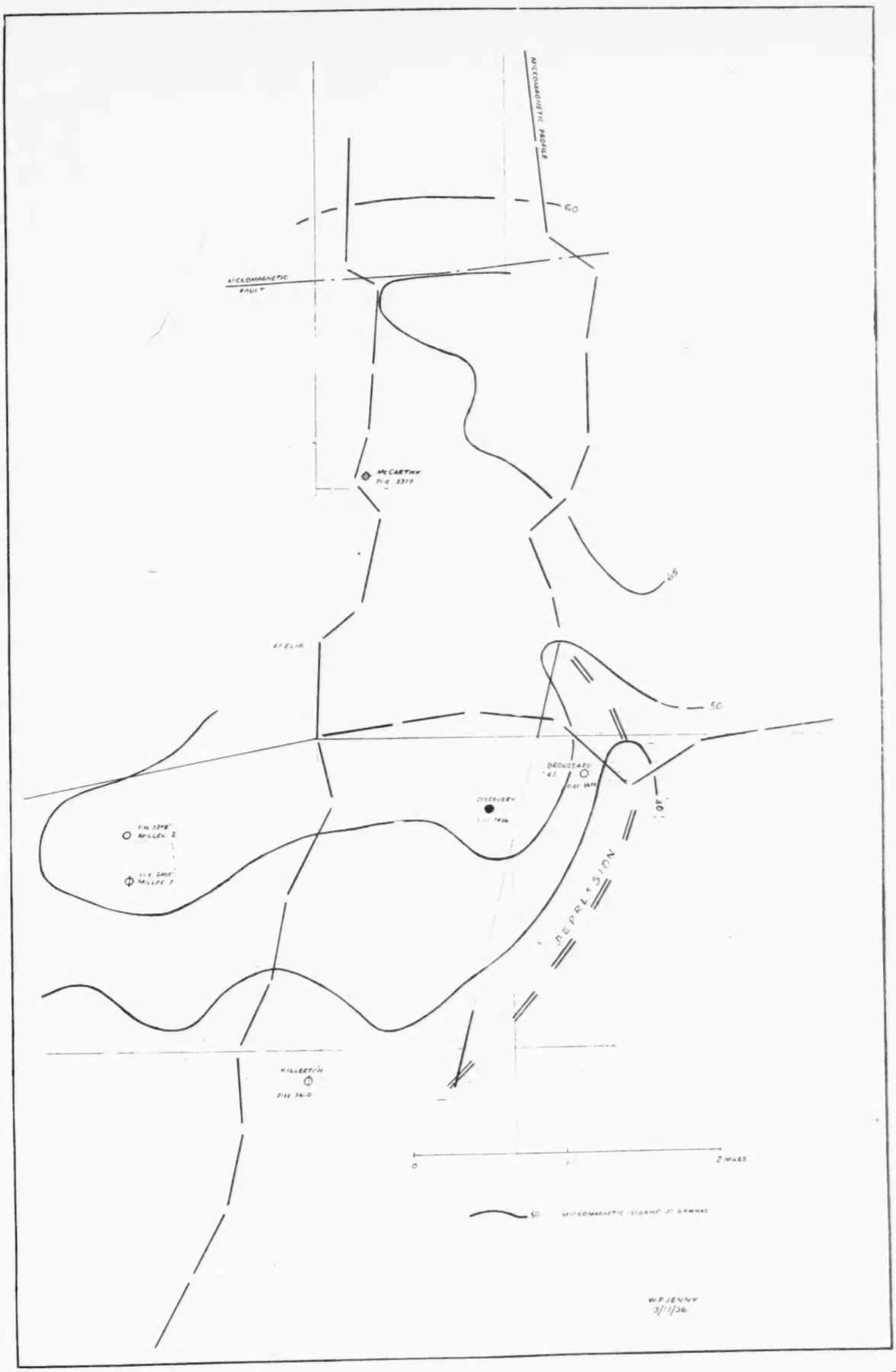

FIGURE 8
Magnetic and Hockley profiles through the New Waverly area of Walker County, Texas

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Methods of Estimating Underground Reserves

By V. BILIBIN, Moscow

PART I

INASMUCH as the study of reserves will constitute the most important phase of the Seventeenth International Geological Congress, scheduled to be held in Moscow, U. S. S. R., in July, August and September, 1937, *The Oil Weekly* presents herewith V. Bilibin's paper outlining methods of calculating reserves, to be employed by those desiring to submit papers on reserves of nations of the world.

Bilibin's methods of calculating, or estimating, crude oil reserves have been approved by the organization committee of the congress in Moscow, but constructive criticism of them is invited by that committee.

In the interest of the congress, and to facilitate matters, it is suggested to students of reserve calculation that manuscripts printed in English in *The Oil Weekly* will come to the attention of the organization committee through that committee's official translator. The editor will be glad to hear from those desiring to contribute constructive criticism.

I. Marking Areas for Calculations

PRELIMINARY work in estimating underground oil reserves consists in marking the areas on which estimations are to be made.

The following groups of areas are to be marked in corresponding colors on the general geological map of each country:

1. Areas exploited for oil (producing oil fields) and subdivided into: (a) single zone of production; (b) several zones of production (number of zones varying from 2 to 5); and (c) many zones of production (number of zones exceeding 5).
2. Areas economically oil-bearing (tested by deep drilling) but not yet outlined and put into exploitation (with similar subdivisions into number of oil horizons).
3. Areas which on the basis of field prospecting work or of geophysical surveying, can be considered favorable from the point of view of oil-bearingness.
4. Areas insufficiently tested if at all but on the basis of general geologic considerations considered to be favorable from the point of view of oil-bearingness.
5. Areas without any known estimate.
6. Areas which on the basis of geologic considerations may be considered as not oil-bearing; areas where the absence of oil has been proved by deep drilling.

The above cited groups of areas must completely cover the entire area of each country. Each of these groups is marked on the map in its own color.[1]

The marking of the areas of each group on the map must be carefully based on corresponding data and proved to be geologically reasonable.

Table of Areas of Each Group

Names of Categories	Size in Sq. Km.	Percent of Total
1. Exploited Fields:		
(a) Single zone of production		
(b) Several zones		
(c) Many zones		
2. Areas economically oil-bearing (not yet exploited):		
(a) Single zone		
(b) Several zones		
(c) Many zones		
3. Areas possibly oil-bearing according to prospecting data		
4. Areas possibly oil-bearing on general geological considerations		
5. Unexplored areas		
6. Areas not oil-bearing		
Total		100

Estimations of reserves are made by the areas included in the first four groups.

Apart from this the total surface of each group is to be calculated and presented in the form of a table.

II. Categories of Reserves and Their Relation to the Groups of Areas

With a view to the accuracy of the estimated reserves calculations are made in accordance with the following categories of resources.

1. Prepared reserves — category A_1
2. Explored reserves " A_2
3. Visible reserves " B
4. Supposed reserves " C_1
5. Possible reserves " C_2

Reserves are divided into categories on the following basis:

A_1. Prepared reserves—Reserves which can be obtained from already producing wells.

A_2. Explored reserves—Reserves which can be obtained from new wells of the prospected horizon within its fixed boundaries.

B. Visible reserves—Reserves which can be obtained

[1] The following colors are recommended for legend:
For areas of the first group—red (shades from light to deep red) indicating the number of horizons.
For areas of the second category—brown with corresponding shades indicating the number of horizons.
For areas of third category—grey.
For areas of fourth category—yellow.
For areas of fifth category—diagonal lining.
For areas of sixth category—blank.

either from the parts of prospected horizons (the boundaries of which have not yet been fixed), or from discovered but insufficiently tested horizons.

C_1. *Supposed reserves*—Reserves which can be obtained: 1. in the areas of the first two groups from those horizons the presence of which in the cross-section and possible oil-bearingness have been established on geological data; 2. in the areas of the third group from those horizons, the presence of which in cross-section is established on the basis of geological considerations.

C_2. *Possible reserves*—Reserves which can be obtained from areas where prospects have given favorable results and especially from those of their horizons, the presence of which in the cross-section of the field is only conjectured; we may also mention here reserves obtainable from all the horizons of areas considered to be oil-bearing on the basis of geologic considerations but insufficiently tested if at all.

1. *Areas being exploited for oil (producing oil-fields).*

(a) Single zone of production. Reserves which can be obtained from producing wells—prepared reserves (A_1).

Reserves which can be obtained from the prospected and outlined parts of oil-fields (with the exception of the remaining future production of producing wells)—explored reserves (A_2).

Reserves which can be obtained from the parts of oil-fields not yet outlined—visible reserves (B).

(b) Many zones of production. Reserves which can be obtained from producing wells—prepared reserves (A_1).

Reserves which can be obtained from prospected horizons, within the boundaries of the outlined parts (with the exception of the remaining future production of producing wells)—explored reserves (A_2).

Reserves which can be obtained from not yet outlined parts of prospected horizons or from horizons already disclosed but not sufficiently tested—visible reserves (B).

Reserves which can be obtained from horizons not yet disclosed; their presence in the cross-section and possible oil-bearingness being established on general geological considerations—supposed reserves (C_1).

2. *Areas proved to be economically oil-bearing but not yet outlined and put into exploitation.*

Reserves which can be obtained from not outlined parts of tested horizons or from horizons already disclosed but insufficiently tested—visible reserves (B).

Reserves which can be obtained from horizons not yet disclosed; their presence in the cross-section and possible oil-bearingness being found out on the basis of geological considerations—supposed reserves (C_1).

3. *Areas which on the basis of general prospecting or geophysical survey can be considered favorable for oil.*

Reserves which can be obtained from horizons, the presence of which in the cross-section and their possible oil-bearingness are established on geological ground—supposed reserves (C_1).

Reserves which can be obtained from horizons, the presence of which in the cross-section is only surmised—possible reserves (C_2).

4. *Areas which on the basis of geological considerations prove to be oil-bearing but which have been insufficiently tested if at all.*

Reserves which can be taken from all horizons of such areas—possible reserves (C_2).

III. Methods of Estimation Used for Individual Categories of Reserves

1. *Prepared reserves* (A_1).

Estimations are made by curves.

2. *Explored reserves* (A_2).

Estimations are made by curves.

3. *Visible reserves* (B).

Estimations are made by curves by analogy or by saturation method.

The estimation of reserves for each horizon by curves is to be compared with the reserves estimated by saturation method; the amount of oil obtained is to be taken into consideration.

4 and 5. *Supposed* (C_1) and *possible* (C_2) *reserves.*

Estimations are made by the saturation method.

(Part 2 of this series of three articles will appear in an early issue.—Editor.)

Table showing how the system of categories of reserves is connected with separate categories of areas.

Groups of Areas	CATEGORIES OF RESERVES				
	A_1 Prepared Reserves	A_2 Explored Reserves	B Visible Reserves	C_1 Supposed Reserves	C_2 Possible Reserves
1. Producing oil fields...	Remaining future production from producing wells	From explored zones in their outlined parts	From not outlined parts of explored horizons or already discovered but insufficiently tested	From horizons, the presence of which in the cross-section and their possible oil-bearingness have been established on geological ground	.....
2. Areas economically oil-bearing but not yet exploited.....	.....	.....	From not outlined parts of explored horizons or already discovered but insufficiently tested	From horizons, the presence of which in the cross-section and their possible oil-bearingness is established on geological ground	.....
3. Areas possibly oil-bearing on prospecting data.....	.....	.....	.....	From horizons, the presence of which in the cross-sectlon and their possible oil-bearingness is established on geological ground	From horizons the presence of which in the cross-section is suggested
4. Areas possibly oil-bearing on geological considerations.....	.....	.....	.....	.....	From all horizons of these areas

Any Junk Today?

YOU can remove all junk from the bottom of the hole—safely, quickly and at small expense—with a Globe Basket Bit.

Bolts, nuts, steel splinters, and in fact, any metal pieces up to several inches in size are easily recovered and removed from the well.

HOW IT "FISHES"

This successful tool operates to cut an oversize core with a drill head having narrow teeth which are bevelled and tapered toward the inside. When rotation is commenced these bevelled teeth force all junk to the center of the hole. Continued rotation quickly cuts a large-diameter core which enters the barrel, carrying on its top the junk.

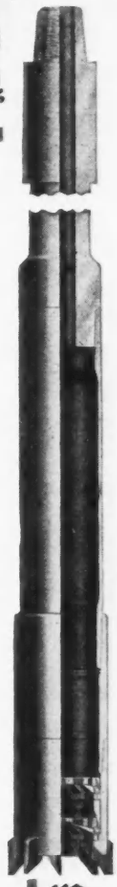
The core passes the two core catchers (which do not rotate after the dogs have engaged the core) and after a few feet of core has been cut the Basket Bit is slowly and carefully picked up. The core catchers then operate to . . .

break off the core and bring it out of the hole with the fish; or the dogs will slide up over the end of the core and the long dogs in the lower catcher close under the "fish" and bring all junk safely out of the hole.

The simple, strong design of the Globe Basket Bit makes it safe and inexpensive to use, and its remarkable success often secures savings in a single run to offset the cost of the tool.

The dogs in the upper catcher do not revolve after engaging the core, and are strong enough to pull cores from hard formations.

The long, closely-set dogs in the lower catcher close under bolts, nuts, or other small "fish" and bring them out of the hole.



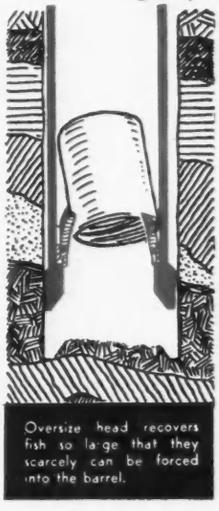
OTHER IMPORTANT USES

1. The Globe Basket Bit is also successfully used to bring a crooked hole back to vertical. When rotated rapidly the short, sharp teeth cut away the bend in the hole and start a shoulder. The closely-spaced teeth do not slip off the shoulder, and a new vertical hole is quickly started.
2. For coring hard formations which are not easily washed away, the sharp, narrow teeth of the Globe Basket Bit secure remarkable results.
3. Other uses are as a wash-over shoe when fishing for drill pipe lost in a rat hole, and similar fishing operations.

Junk forced to center as Basket Bit is rotated.

Coming out of hole with junk and core held securely inside Basket Bit.

The dogs often catch and remove large fish before a core is cut.



Oversize head recovers fish so large that they scarcely can be forced into the barrel.

Note how the teeth are tapered and bevelled toward the center. This view also shows how it is possible to cut oversize cores, for example, a 7¼" core in a 12½" hole.

For recovering larger pieces of junk—which can barely be forced into the barrel—an oversize head with spring type catcher is furnished.

Look on pages 502 and 503 of your 1936 COMPOSITE CATALOG for complete descriptions and prices of the Globe Basket Bit; or write us direct for specific information.

DRILLING, REAMING AND CORING EQUIPMENT

Look for this Trade Mark in the Composite Catalog

GLOBE OIL TOOLS

GLOBE OIL TOOLS COMPANY
(Los Angeles County)
Los Nietos, California, U S A.

Use a GLOBE BASKET BIT!

Combination Gas-Lift And Centrifugal Pump

PROVES ECONOMICAL AND HAS INCREASED PRODUCTION OF OKLAHOMA CITY WELLS

By H. W. BAKER, Engineer*

THE discovery well in the Oklahoma City field is located in the C SE SE 24-11n-3w, Oklahoma County. The well was completed on December 4, 1928, at 6404 feet, with an initial production of 4909 barrels. It was later deepened to 6499 feet, and production increased to 6464 barrels. The gravity of the oil was 38.5 Baume.

From this beginning one of the great oil fields of the world was developed. The depth of the wells ranged from 6000 to 6700 feet. Some wells were completed that had initial daily production as high as 105,000 barrels of 40 gravity oil. Gas volumes as high as 230,000,000 cubic feet were recorded. The original bottom-hole pressure was in the neighborhood of 2600-2700 pounds per square inch.

Even at that time experienced oil men were asking this question: "Can that great portion of recoverable oil, the settled production, be lifted at a profit, after the natural flow ceases and the reservoir pressure declines until gas lift is no longer possible?"

At present in the Oklahoma City field there are a number of wells equipped with rods and tubing. In addition to wells being produced by beam pumping, there are gas lift and several varieties of bottom-hole pumps in use, which are all a variation of gas-lift, but these are limited in use by formation conditions.

In an attempt to lift the settled production in the Oklahoma City field, several companies have installed a combination of gas lift and an electrical-centrifugal bottom-hole pump.

Since many of the wells employing the combination method are equipped with seven-inch casing, that condition will be considered in this article. The principles involved would work equally well where larger casing is used for the oil string. Two-inch tubing must be used in the wells equipped with seven-inch casing, because there is not enough clearance between the cable and the casing when larger tubing is used.

In equipping a well with the combination installation, Figure 1, the tubing is pulled and if the oil string is not already equipped with a seven-inch steel tee, one is installed. The pump most commonly used consists of a 60-stage centrifugal pump, powered by a 97½-horsepower, two-pole, 3600 revolution per minute, 60-cycle motor. The motor, pump and protector are attached to a joint of two-inch tubing, and started in the hole. From 300 to 1000 feet above the top of the pump a 2½-inch by 7-inch is inserted. The first joint of tubing above packer is usually perforated at the collar end with approximately 32 staggered ¼-inch perforations, about eight inches apart. Running of the tubing is then continued and the pump suspended as close to the bottom as possible. The top of the oil string is equipped with a two-inch by seven-inch special type tubing head. Figure 1 shows the sub-surface position of the equipment after the well is ready to operate.

Power is supplied to the motor through an electric cable which is securely clamped to the tubing by metal bands. These bands are easily removed when it becomes necessary to pull the well. The cable is wound upon a special drum when the well is being pulled, and when the tubing is rerun it is unwound and reclamped to the tubing. The top and bottom of the packer are equipped with special adaptors (see Figure 1), which allow the cable to pass inside the packer at the top, and outside below the packer. A packing gland is placed in the bottom adaptor to prevent leakage through the packer. At first some difficulty was experienced in pulling the wells because the pressure below the packer tended to hold the packer rubber rings tightly against the casing. This trouble was eliminated by running the packer equipped with a relief valve control head which released the pressure when a strain was placed on the tubing.

The cost of installation varies slightly with different conditions, but assuming the well already equipped for gas-lift and making 500 barrels or more per day, the cost of installation will closely approximate the itemized amount shown in Table 1.

TABLE 1
Average Cost of Installing Combination Centrifugal Pump and Gas Lift in an Oklahoma City Well

ITEM	*Condition	Price
Packer 2½" x 7"	A	$210.00
Tubing Head 2" x 7"	B	97.00
Tee 7" Steel	A	60.00
Transformers—150 KVA	A	891.00
Primary cut-off	A	16.20
Fence—Steel Frame	A	32.00
Miscellaneous—Fittings, Grease, etc.	..	50.00
Pulling unit—Rental	..	720.00
Truck—Rental	..	250.00
Labor:		
Roustabout	.....	254.00
Supervision	.....	100.00
Total	.....	$2680.20

*A refers to new equipment.
B refers to equipment which has been used before.

*The author is with Phillips Petroleum Company, but was a senior petroleum engineer at The University of Oklahoma when this article was written.

As will be noted from Figure 1, with the packer installed some 500 feet above the pump, the oil coming from the sand enters the pump intake, and is propelled by the pump, up through the tubing and out through the perforations in the top adaptor. It is confined in the annular space by the packer, and is then gas lifted to the surface. The gas-lift is accomplished by a steady injection of gas through the tubing perforations.

Results and Advantages

The results obtained from five wells, selected from a group of wells operated by one of the larger companies, are given in Table 2. These data are based on averages of 15 days before and 15 days after the well was equipped with the combination hook-up.

In Table 2, the input gas oil ratio has been omitted for wells 2, 3, and 5 because these wells were changed directly from a straight bottom-hole centrifugal lift to the combination method. Wells 1 and 4 were changed directly from gas lift to the combination lift, for which there is no kilowatt hour ratio.

As shown in Table 2, an increase in oil production was accomplished when the change over from either method was made. The input gas oil ratio and kilowatt hour ratio were also reduced in each case.

Assuming the cost of gas to be eight cents per 1000 cubic feet, and the cost per kilowatt hour to be one cent, the comparative lifting costs per barrel of oil are shown in Table 3.

In straight gas-lift there is a high back pressure on the sand face, when the input gas flows continuously. This back pressure is ap-

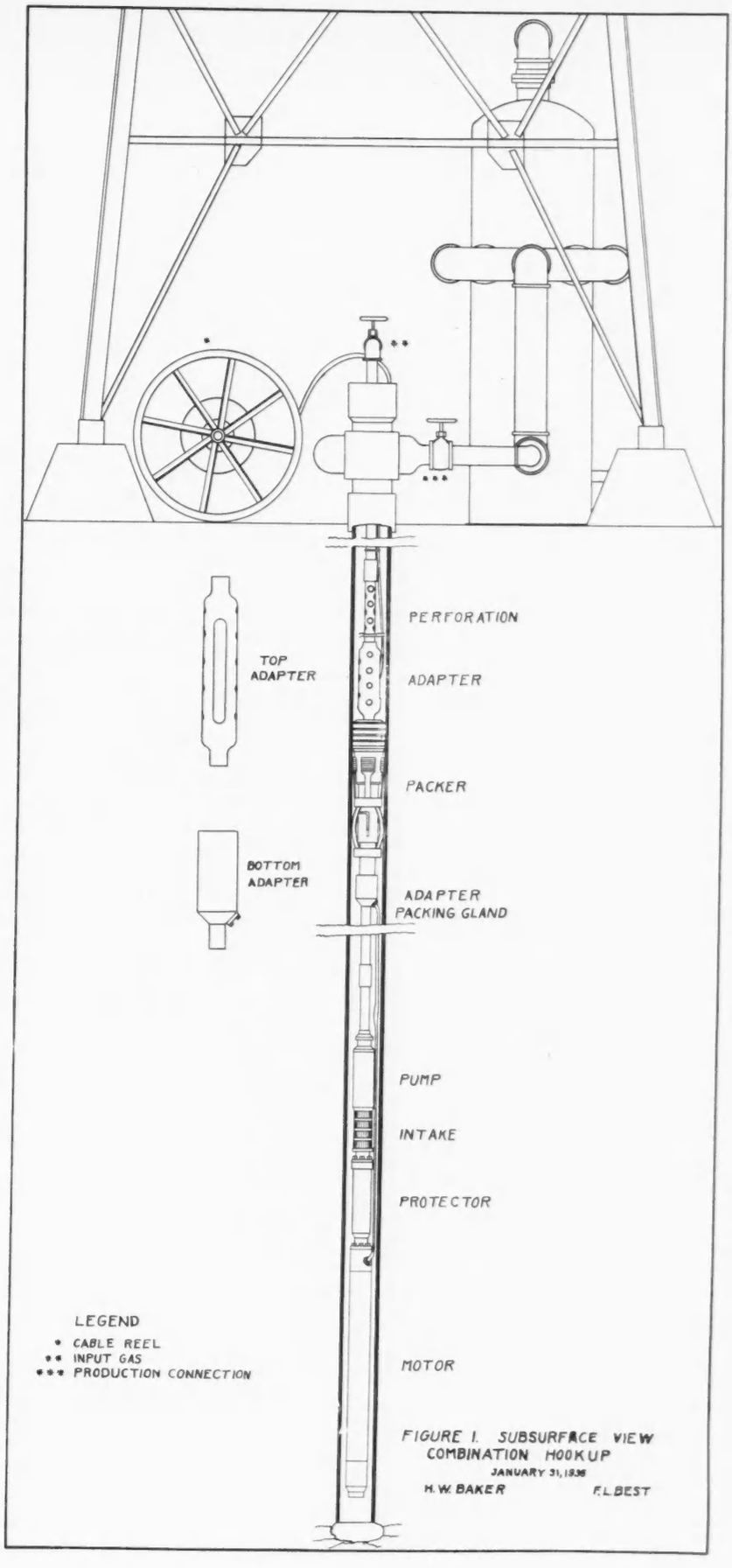


TABLE 2

Combination Centrifugal Pump and Gas-Lift Results Obtained on Five Wells

WELL NO.	Hourly Production		Input Gas Oil Ratio		Kilowatt Hour Ratio	
	Before	After	Before	After	Before	After
1	12	120	5,060	1,100	....	.85
2	32	115	....	825	2.7	.90
3	35	135	....	975	2.89	.65
4	6	57	11,000	1,325	....	1.2
5	45	120	....	1,150	2.5	.78

proximately equal to the casing head pressure minus the pressure drop due to the friction of the gas flowing down the tubing, and plus the static head of gas in the tubing. When the gas is intermitted this back pressure is relieved periodically and may be entirely eliminated when a packer is set in conjunction with a gas chamber and standing valve. However, as the bottom-hole pressure declines the fluid head will not build up sufficiently to permit gas lift with any reasonable degree of efficiency. In areas of low-reservoir pressure the effects are the same in both cases, resulting in a high gas-oil ratio with a minimum of oil lifted.

Where the combination method is used the pressure that builds up below the packer tends to approach the bottom-hole pressure, but is prevented from reaching that value because the centrifugal pump reduces the pressure by continuously removing oil and gas from that section of the hole below the packer. The input gas therefore has no tendency to increase the pressure on the sand face, and a back pressure condition is reached which is almost ideal, for two reasons:

(1) The pressure is great enough to prevent any swabbing effect, or danger of water being pulled into the well.

(2) The back pressure is not large enough to prevent free passage of the oil into the hole.

The cost of electricity when converting from straight gas-lift to the combination method is approximately one cent per barrel of oil, but as can be seen from Table 3, the overall lifting cost is materially reduced, while the out-put of oil is substantially increased.

In the straight electrical lift there is practically no pressure on the sand face. The formation gas on a well operating with the bottom-hole pump alone is free to pass out through the annular space to the surface and into the low-pressure gathering lines or into vent lines. In the combination method, as stated above, the gas is trapped between the bottom of the packer and the fluid level of the well, building up until a bottom-hole flowing pressure has been reached. This makes it necessary for all of the gas that reaches the surface to pass through the pump. By actual test it was found in some wells that after equipping with the packer the same wells made only one-third to one-fourth as much formation gas as before.

This leads to the belief that due to the increased pressure on the sand face, much of the gas is held in solution while passing through the pump, and is then permitted to expand and do useful work in the region of gas lift. Another indication of this is the fact that a comparatively small amount of trouble is encountered by vapor-locking of the pumps, where the combination method is used.

One of the main disadvantages encountered where the well is equipped with bottom-hole centrifugal pump only, is the limited output, due to the heavy head of oil that the pump is required to lift. In some instances the horsepower output of the pumps can be increased, but this increase is limited to about 97½ horsepower where the well is equipped with seven-inch casing.

The discharge velocity of centrifugal pumps varies directly as the square root of the head lifted. Reducing the head from 6000 feet to 500 feet greatly increases the output of the pump. Obviously the head lifted by the pump is greater than a head of 500 feet of oil, due to the pressure applied against the pump by the input gas pressure. The total head, however, is much less than in the case where the oil is pumped the entire 6000 feet to the surface without the effect of aeration. This is borne out by Table 2 which shows an increase in oil when converting from the straight electrical lift to the combination method.

The advantages of the combination method over either the straight gas lift or the straight electrical lift may be summed up as follows:

(1) Lifting cost is less than in gas lift of straight electrical lift. (Refer to Table 3.)

(2) Output of residual oil is greater than either gas-lift or electrical lift.* (Refer to Table 2.)

(3) More ideal pressure conditions are secured at the sand face.

(4) Reservoir gas is conserved.

Application and Limitations

At present in the Oklahoma City field, the method has found application on a number of wells in establishing potentials, and in making the prorated allowable after the potentials have been established. This method establishes a larger potential than can be obtained by either the straight gas lift or the electrical lift at the present time. However, it is a fair and just method of obtaining the wells potential production, for as has been shown, a more ideal pressure condition is maintained at the sand face, and there is no swabbing effect produced. It is correct to state that there is in this field a group of wells which, because of very low formation pressures, have not been able to establish fair potentials because previously used installations have proved inadequate.

The rental of the pump would be about $125 per day. In the straight electrical lift the rental is about $100 per day.

TABLE 3

Comparative Lifting Costs

		Cents
Wells No. 1 and 4—		
Straight Gas-Lift:		
Cost of Gas	.....	64.2
Combination Method:		
Cost of Gas	9.7	.....
Cost of Electricity	1.02	.....
Rental—2 Pumps	5.88	16.6
Decrease in Lifting Cost per Barrel of Oil	.....	47.6
***Wells No. 2, 3, 5—**		
Straight Electrical Lift:		
Cost of Electricity	2.69	.....
Rental—3Pumps	11.16	13.85
Combination Method:		
Cost of Gas	7.86	.....
Cost of Electricity	.77	.....
Rental—3 Pumps	4.22	12.85
Decrease in Lifting Cost per Barrel of Oil	.....	1.00

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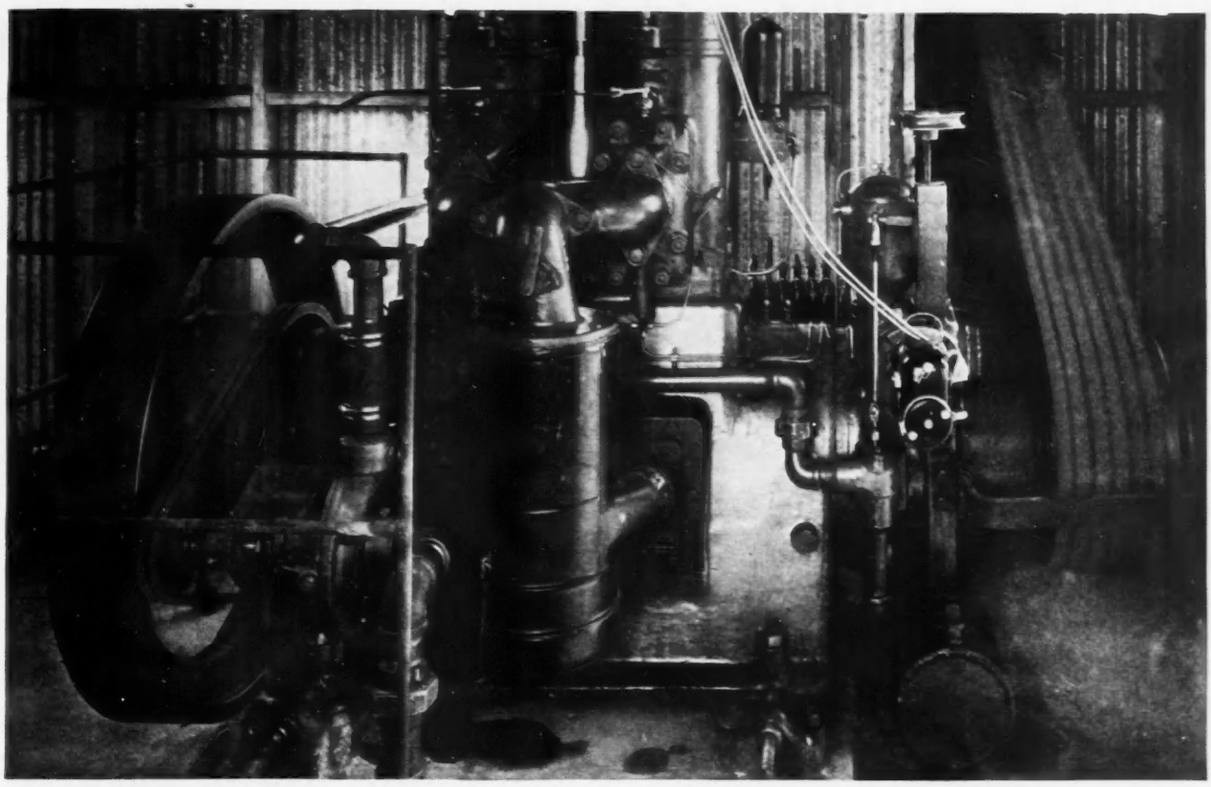

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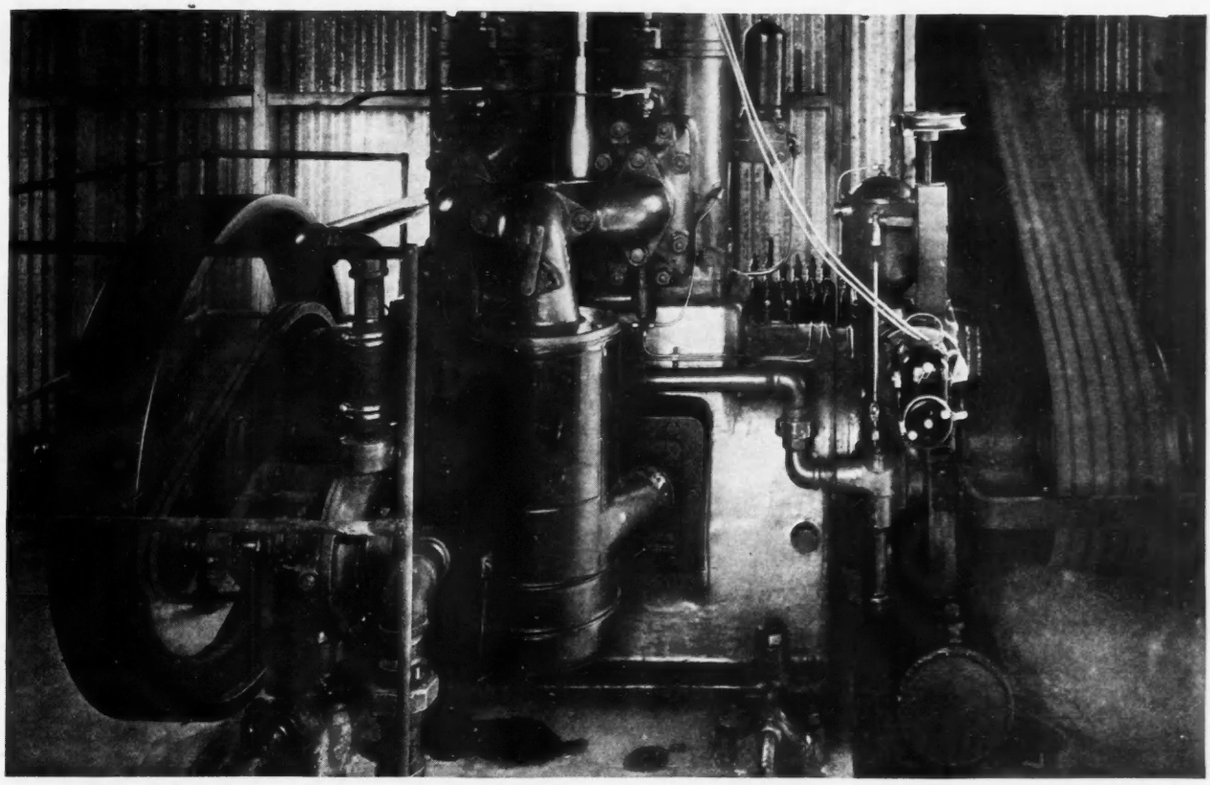

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"SOUR GAS? That must be tough on the pipe joints, Lad"

Owners: Phillips Petroleum Co. *Gen'l. Contractors:* Henry L. Lemon Co. *Welding Contractors:* H. C. Price, Inc.

"This line is all *'Shield-Arc'* welded. Joints like these NEVER go sour!"

This 24-inch Texas Panhandle line will carry sour gas of high hydrogen-sulphide content. Corrosion may show up in later years . . . in the pipe . . . but you'll need a magnifying glass to find any pitting in those welds.

Produced by *"Shield-Arc"* welders and "Fleetweld" electrodes, pipe joints are more lasting than mild steel itself!

If you are looking for ways to cut costs and make lasting construction—either in the building of new lines or in the maintenance of existing lines, here's a valuable hunch. Call in the local Lincoln man—he is full of ideas that will help you! THE LINCOLN ELECTRIC COMPANY, Dept. L-229, Cleveland, Ohio. Largest Manufacturers of Arc Welding Equipment in the World.

"SHIELD-ARC"

THE ONLY *complete* WELDER

THE LINCOLN ELECTRIC CO.
Dept. L-229, Cleveland, Ohio

Please send a free copy of "The Shielded Arc" which gives proof of the permanence of *"Shield-Arc"* welds.

Firm .....

Name .....

Position .....

Address .....

City .....

State .....

Prices Unchanged

HEAVY STOCKS AND COLDER WEATHER BURDEN MARKET

VERY little change occurred in the market situation during the past week, prices remaining virtually the same throughout the country. Cold weather, coming late in the season, perceptibly held down the consumption of both gasoline and kerosene, and both commodities were moving comparatively slowly, although prices held to the previously prevailing levels.

For the weeks ahead there seem to be good prospects that prices will continue to hold at prevailing levels, if not to grow firmer or advance somewhat; considering that they have gone through the past several weeks of unpropitious circumstances without weakening. The gasoline inventories, now near the usual peak of the year, are more than 10 percent higher than a year ago, which is a larger increase than warranted by the gain in demand. Meanwhile, protracted cold or cool weather has retarded the usual spring increase in consumption of gasoline and kerosene. Yet despite these circumstances the markets have been fairly steady. Consequently, it seems quite possible that the markets soon may show some improvement, as warmer weather brings heavier consumption of the petroleum products, and as the gasoline inventories are gradually reduced. The gasoline stocks were reduced materially during the latest week on which figures are available.

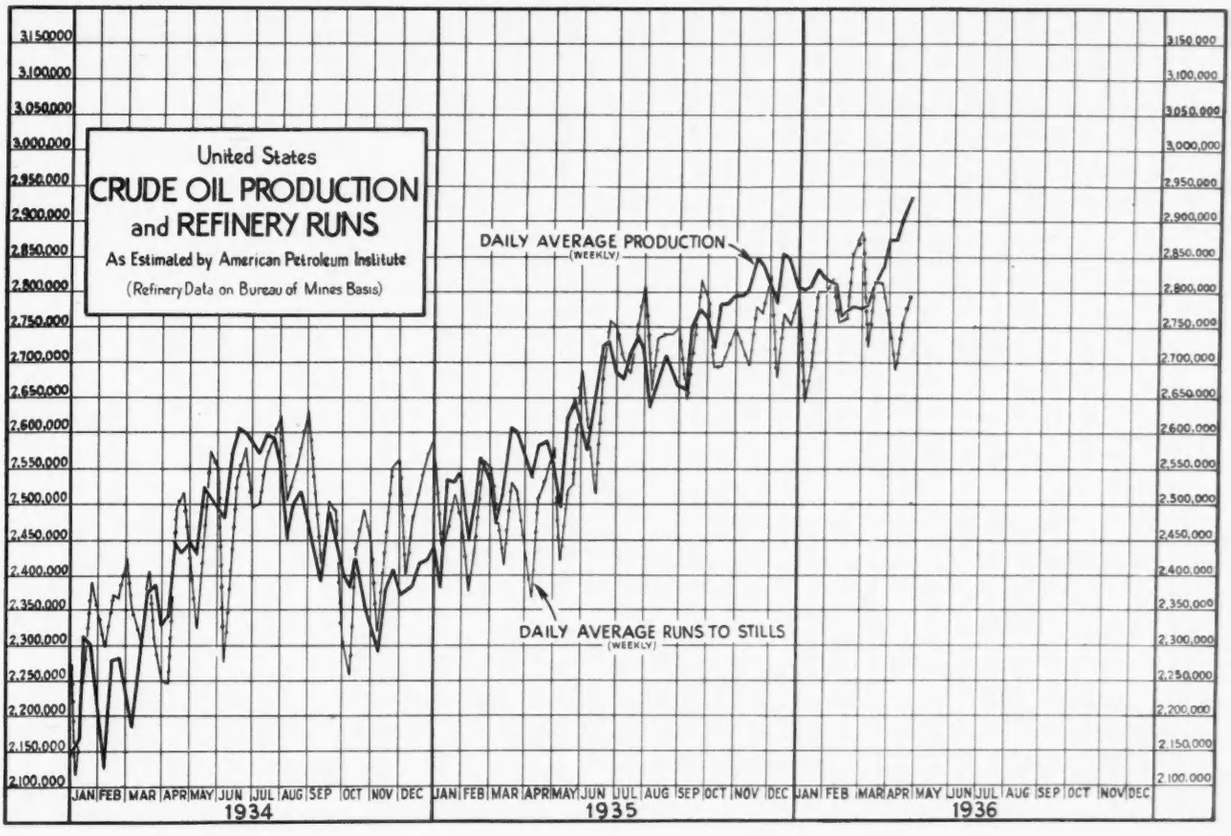
Crude Oil Market

The prospects for the crude oil market hinge largely on developments in the gasoline market, as well as on the future trend of crude production control. A firm or strong gasoline market and strict regulation of crude output in coming weeks naturally would generate new hopes for a further moderate increase in Mid-Continent crude oil price postings. But the strong gasoline market so far has not materialized, and the crude production allowables prescribed for May in the various leading producing states are not in sufficiently close conformity with the Bureau of Mines recommendations to generate any great market optimism. Furthermore, the Rodessa market threat has not been eliminated to the satisfaction of the industry, and that area, with its possibilities for dragging down the markets, continues to be watched with considerable anxiety.

Several weeks ago, before the Rodessa situation became so disturbing, and before gasoline stocks had climbed to their present high level, there was probably much more justification for the hopes then existing for further increases of 10 or 15 cents a barrel in Mid-Continent crude postings.

Tank Car Prices Same

Late last week U. S. Motor gasoline continued to be quoted at refineries throughout the Mid-Continent at the same prices that prevailed a week previously. The recently adopted octane



classifications now are used generally. At plants in Oklahoma, 62 octane gasoline and below was priced at 5 to 5¼ cents a gallon; 63 to 67 octane was 5¾ to 6 cents; and 68 to 70 octane or regular grade was 6 to 6¼ cents.

In North Texas and West Texas, the corresponding prices, f.o.b. refineries, were the same as those in Oklahoma, while in East Texas the usual product, 62 octane and below, continued at 5 cents a gallon.

Kerosene prices also have remained unchanged during the past week. The 41-43 water white grade f.o.b. Oklahoma refineries was 4⅜ to 4½ cents a gallon, while the 42-44 water white grade was 4½ to 4⅝ cents.

Quiet in California

Last week was quiet in marketing circles in California, with no change in conditions, except that it had begun to appear as if most of the independent refiners would raise their gasoline prices to conform with the higher prices announced by the major companies. Not all independents had raised their prices, but it was felt that most of them would do so. Many independent service stations had filled their tanks with low price gasoline prior to the recent raise in gasoline prices, and some last week were selling at lower prices and were expected to continue doing so until their stocks are depleted. California's crude production record last week was encouraging, the daily average declining to 566,500 barrels daily from 575,500 barrels daily the previous week. The average for last week was within about 14,000 barrels of the 552,600 barrels per day recommended for April by the Bureau of Mines.

LEO FLEISHMAN, JR., sales manager for The Texas Corporation at Havana, Cuba, was married April 20 to Miss Kathleen Ford Park of that city.

East Texas Tank Car Shipments

Week Ending April 19, 1936

PRODUCTS	No. Cars	Estimated Gallons
Gasoline	465	3,782,231
Fuel Oil	318	3,084,935
Casinghead gasoline	202	1,674,008
Kerosene	36	282,676
Distillate	33	267,311
Residuum	28	236,931
Gas oil	28	226,377
Naphtha	3	20,193
Total	1,113	9,574,662
Total previous week	950	8,084,981
Intrastate	448	.....
Coastwise	368	.....
Interstate	297	.....
Total	1,113	.....

TWO NEW OIL LINES

Provide market outlet for Corpus area fields

Corpus Christi.—Actual construction has been started on the first line and work will be commenced immediately on the second line in a pipe line building campaign to give further outlet for the Corpus Christi group of oil fields to tidewater. The lines are a part of a rumored crude buying campaign being launched in this rapidly developing field.

Potter Pipe Line Company, an East Texas concern, has pipe on railroad siding for a combination six and eight-inch main from the Clarkwood townsite through the Saxet and Corpus Christi fields to General American Tank Storage and Terminal Company's tank farm. Storage facilities of this terminal will be utilized and the oil will be shipped by tankers loaded in the Corpus Christi ship channel. The line will be approximately ten miles long and will give these areas a much needed outlet to the deep water port, the only other outlet at this time being through the Texas Pipe Line Company's line from this field to the company's tank farm and loading point.

Potter Pipe Line Company is headed by J. C. Potter, president.

The second project is Republic Pipe Line Company's four-inch line, which will not be as long as the other line, but which will connect to the main Saxet field as well as to the Saxet Heights (Corpus Christi) field. It will extend to a point adjoining the Texas Pipe Line Company's terminal, where the Republic Pipe Line Company has a site for a tank farm. The company will commence immediate construction of two 80,000-barrel steel storage tanks at the port. It also will connect its Plymouth field line into the new tanks. At this time, the Texas Pipe Line Company's terminal is being used by this company.

Crude Contracts Sought

There is considerable work underway in the district at this time on the part of crude oil buyers in an effort to line up contracts. It is reported, but not confirmed, that small bonuses are being paid in some cases for this production. The fight for production undoubtedly is accounted for by the fact that the field is at the very edge of the deep water port and transportation is unusually cheap. In addition, the oil is of a quality that is in unusual demand.

NEW GASOLINE PLANT

Sinton, Tex.—Construction has been started on a new low pressure absorption gasoline plant in the Sinton-Plymouth district of San Patricio County by Manhattan Gasoline Company. The plant will have a daily capacity of from 7000 to 8000 gallons of gasoline per day and will handle part of the output of the several fields in this county. It will be located about ¼ mile south of the Plymouth Oil Company's Plymouth field office, which in turn is about 10 miles northeast of Sinton.

Manhattan Gasoline Company is a branch of Refugio Refining Company, which has several plants in this part of the Gulf Coast. The output will be handled by Hanlon-Buchanan Corporation.

Summary of Wells Completed in the United States Week Ending April 25, 1936

	Completions	Oil Wells	Gas Wells	Failures	Initial Production	Total Completions 1936	Total Completions this Date, 1935
Alabama	.....	.....	.....	.....	.....	2	3
Arkansas	.....	.....	.....	.....	.....	30	64
California	18	15	.....	3	6,180	297	236
Colorado	.....	.....	.....	.....	.....	5	4
Illinois	.....	.....	.....	.....	.....	4	8
Indiana	12	4	3	5	225	87	48
Kansas	35	24	.....	11	32,781	458	437
Kentucky	.....	.....	.....	.....	.....	56	40
Louisiana	27	17	3	7	37,621	306	238
Michigan	14	2	3	9	135	211	105
Mississippi	.....	.....	.....	.....	.....	1	7
Montana	4	3	.....	1	220	30	22
New Mexico	14	14	.....	.....	29,076	148	83
New York	.....	.....	.....	.....	.....	.....	.....
Ohio	38	8	19	11	21	643	455
Oklahoma	59	37	2	20	105,162	831	699
Pennsylvania	.....	.....	.....	.....	.....	.....	51
Texas	265	210	8	47	339,066	3,688	3,754
Utah	.....	.....	.....	.....	.....	.....	.....
West Virginia	6	4	1	1	28	226	159
Wyoming	1	1	.....	.....	2,760	15	14
Total this week	493	339	39	115	553,275	.....	.....
Total last week	506	312	66	128	335,362	.....	.....
Total this year	7,007	4,636	726	1,645	6,884,416	.....	.....

Comparison of Permits Granted for New Wells

STATE—	Week Ending April 25	Total this Mo.	Total this Year	Total this Date Last Year	1935 Year Total
Arkansas	2	8	27	50	70
California	27	92	285	258	925
Louisiana	30	110	385	252	846
Kansas	39	163	559	437	1,204
Michigan	...	43	186	131	749
Oklahoma	88	329	929	702	2,311
Texas	234	1,147	4,175	3,953	10,800
Total	420	1,892	6,551	5,783	16,964

PRODUCTION RISES

Output is slightly higher than in previous week

UNITED STATES crude oil production last week, ended April 25, showed a slight increase over that in the previous week, and was substantially above the level recommended by the Bureau of Mines. For the period the national output averaged 2,927,650 barrels daily, according to the regular estimates of THE OIL WEEKLY. That was 8075 barrels a day more than in the previous week, and 130,350 barrels per day more than the recommendation of the federal department.

The increase over the preceding week was the net result of gains in production in Texas, Louisiana and Kansas that more than offset decreases in Oklahoma and California; while the states of smaller production showed only insignificant fluctuations.

Each of the five mentioned leading states last week produced more than the Bureau of Mines allocation. But Louisiana showed the greatest excess, as it has been doing for several months. California was within a comparatively close margin of its allocation, this record for the state being encouraging. The Texas excess was partially justified by the fact the state earlier in the month, as usual, had smaller output; the state allowable regularly increases as the month progresses, as new wells are completed. Similarly, the Oklahoma and Kansas excesses were not cause for particular alarm, as those states on the average throughout each month adhere rather closely to the federal government advice, although fluctuations above and below the allocations occur during the month.

Louisiana last week averaged 209,350 barrels daily, or nearly 9,000 barrels a day more than in the previous week, and was 48,450 barrels above the bureau allocation of 160,900 barrels daily for April.

Texas averaged 1,150,100 barrels daily last week, about 12,000 barrels a day more than in the previous week, and 27,300 barrels daily more than the federal quota.

Kansas output last week jumped to 159,075 barrels daily from 147,750 barrels the week before. The state's April allocation on the Bureau of Mines schedule was 146,000 barrels per day. California production declined to 566,500 barrels daily last week from 575,500 barrels per day the previous week, and at the new average was within about 14,000 barrels of the federal allocation of 552,600 barrels daily for April.

Oklahoma last week averaged 557,100 barrels per day, or about 12,000 barrels daily less than in the previous week, but still 32,100 barrels a day more than the federal allocation of 525,000 barrels daily for the month.

Houston. — The Houston Geological Society held a dance April 25, from 10 p.m. to 2 a.m., at the Beachmont Club This was one of the occasional social events staged by the society.

United States Crude Oil Production

Estimates Compiled by THE OIL WEEKLY

DISTRICT OR STATE	BARRELS DAILY FOR WEEK ENDING April 25	April 18
TEXAS—		
Texas Panhandle	61,500	60,800
North Texas	59,300	58,800
West Central Texas	25,100	25,200
West Texas	180,100	178,900
East Central Texas	50,900	49,100
*East Texas Field	447,600	446,400
†South Texas	77,800	75,700
†Texas Gulf Coast	247,800	243,400
*Total Texas	1,150,100	1,138,300
OKLAHOMA—		
Oklahoma City	149,300	162,600
Seminole Area	143,175	144,050
Tatums	3,500	3,500
Lucien	13,225	12,670
Fitts	51,325	52,600
Edmond	12,950	12,925
Others	183,625	181,355
Total Oklahoma	557,100	569,700
KANSAS—		
Ritz-Canton	6,725	6,725
Voshell	3,275	3,325
Nikkel-Hollow	4,550	4,625
Sedgwick	5,550	5,700
Burrton-Haury	13,500	13,600
Lorraine	8,600	7,800
Oxford	7,750	7,825
Others	109,125	98,150
Total Kansas	159,075	147,750
LOUISIANA—		
North Louisiana	65,850	59,925
Louisiana Gulf Coast	143,500	140,800
Total Louisiana	209,350	200,725
ARKANSAS	29,825	30,100
CALIFORNIA—		
Long Beach	67,500	67,500
Santa Fe Springs	43,500	43,500
Huntington Beach	35,500	36,200
Dominguez	27,000	26,500
Inglewood	11,500	10,800
Ventura Avenue	35,000	36,000
Seal Beach	8,000	8,000
Midway-Sunset	55,000	50,000
Elwood	12,500	12,500
Kettleman Hills	77,500	80,500
Mountain View	25,500	25,500
Playa del Rey	13,500	14,000
Others	154,500	164,500
Total California	566,500	575,500
MOUNTAIN STATES—		
Wyoming	33,400	34,100
Montana	12,800	13,500
Colorado	5,800	5,600
Total Rocky Mountain States	52,000	53,200
NEW MEXICO	63,800	63,800
EASTERN STATES	105,400	105,200
MICHIGAN	34,500	35,300
*Total United States	2,927,650	2,919,575
*Surreptitiously produced oil in East Texas, not included in above figures, estimated at	15,000	15,000
Grand Total, including surreptitious production	2,942,650	2,934,575

† Coastal Section of South Texas is included with Texas Gulf Coast.

Crude Runs to Stills; Stocks of Finished and Unfinished Gasoline and Gas and Fuel Oil, and Cracked Gasoline Production, Week Ended April 18, 1936

(Figures in thousands of barrels of 42 gallons each as reported to the American Petroleum Institute)

DISTRICT	Daily Refining Capacity			Crude Runs to Stills		Stocks of Finished and Unfinished Gasoline				Stocks of Gas and Fuel Oil			Daily Charging Capacity of Cracking Units			Cracked Gasoline Production
						Finished										
	Potential Rate	Reporting		Daily Average	% Operated	At Refineries	Terms. Trans. Pipe Lines	Unfinished in Naphtha Distillates	Total Finished and Unfinished	Gas Oil & Distillate	Residual Fuel Oil	Total	Potential Rate	Reporting		Daily Average
		Total	%											Total	%	
East Coast	612	612	100.0	456	74.5	7,245	11,652	1,124	20,021	2,989	3,819	6,717	534	534	100.0	98
Appalachian	154	146	94.8	103	70.5	1,504	985	316	2,805	301	181	482	79	78	98.7	26
Ind., Ill., Ky	442	424	95.9	391	92.2	8,008	2,640	1,012	11,660	1,212	1,715	2,927	349	348	99.7	120
Okla., Kans., Mo	453	384	84.8	278	72.4	4,724	2,119	780	7,623	625	1,789	2,414	256	228	89.1	71
Inland Texas	330	160	48.5	99	61.9	1,395	147	212	1,754	199	1,303	1,502	148	105	70.9	26
Texas Gulf	680	658	96.8	575	87.4	6,060	274	2,047	8,381	2,772	3,715	6,487	399	393	78.5	147
Louisiana-Gulf	169	163	96.4	118	72.4	1,310	356	278	1,944	876	1,152	2,028	77	74	96.1	25
North La.,—Ark	80	72	90.0	50	69.4	252	67	97	416	23	284	307	46	44	95.7	9
Rocky Mountain	97	60	61.9	46	76.7	1,607	.....	103	1,710	165	573	738	46	39	84.8	13
California	852	789	92.6	486	61.6	9,365	2,107	1,103	12,575	.....	.....	71,245	280	280	100.0	68
Reported	.....	3,468	89.6	2,602	75.0	41,470	20,347	7,072	68,889	.....	.....	94,847	.....	2,123	95.9	603
Estimated Unreported	.....	401	.....	193	.....	2,573	1,106	447	4,126	.....	.....	1,907	.....	91	.....	37
*Estimated Total U.S. April 18, 1936	3,869	3,869	.....	2,795	.....	44,043	21,453	7,519	73,015	.....	.....	96,754	2,214	2,214	.....	640
*Estimated Total U.S. April 11, 1936	3,869	3,869	.....	2,755	.....	44,902	21,142	7,610	73,654	.....	.....	96,508	2,214	2,214	.....	615
U. S. B. of M., April, 1935	.....	.....	.....	2,502	.....	†37,867	†20,351	†6,175	†64,393	.....	.....	†97,727	.....	.....	.....	520

* Bureau of Mines basis currently estimated. † As of April 30 ,1935.

Earnings Higher

FIRST QUARTER OF 1936 IS BEST FOR SEVERAL YEARS

IN the first three months of 1936 oil companies generally had larger earnings than in the similar period of several previous years. In some cases the results in this year's first quarter were the best since 1930 or 1929, while in other instances the earnings were the best on record for the three months period.

Similarly, it is indicated that the second quarter of this year will be comparatively favorable from an earnings standpoint. The first month of the second quarter has brought a continuation of the satisfactory results of the first quarter.

Favorable earnings this year reflect the relatively high prices that have prevailed on refined products as well as crude oil. They also reflect the high demand for petroleum and petroleum products. Gasoline consumption, for instance, has been running at unprecedented proportions.

Companies operating on the Pacific Coast were exceptions to the general rule as regards earnings in the first quarter of 1936, some having had smaller profit than in the similar period last year, due to depressed markets the early part of this year. However, the markets there have improved lately, and those companies also likely will have relatively good results in the second quarter of 1936.

Atlantic Shows Improvement

Atlantic Refining Company has reported for the first three months of 1936 a net profit of $1,983,000, equivalent to 74 cents a share. That compared with a loss of $129,000 in the first quarter of 1935. The earnings in the first quarter of 1936 were equal to about one half of the profit of the company for the whole year 1935, when the earnings amounted to $1.49 a share.

Plymouth Oil Company also has reported better results in this year's first quarter. Its profit, including that of the subsidiary, Big Lake Oil Company, was $361,156, or 34 cents a share on 1,050,000 shares of $5 par value common stock outstanding. That compared with $185,833 in the similar period last year, equal to 18 cents a share. The earning power was accelerated in the latter part of the quarter this year.

Tide Water Results Good

Tide Water Associated Oil Company and subsidiaries reported that for the first three months of 1936 the earnings were the highest in the history of the company. The profit aggregated $2,707,702. That amount, after preferred dividends, was equal to 31 cents a share on the 5,671,398 no par common shares of stock outstanding. In the corresponding period of 1935 the profit was $1,220,991, or five cents a share after preferred dividend requirements. The company's next best first quarter since organization in 1926 was in 1928, when 20 cents a share was earned on the common stock. Directors of the company, in recognition of the better earnings, have placed the common stock on a dividend basis of 60 cents annually. They declared a quarterly dividend of 15 cents per share, payable June 1 to stockholders of record May 11. Last previous dividend was the 25 cents paid January 15. That was the first payment on the common stock since the semi-annual disbursement of 30 cents a share on February 16, 1931.

Tide Water Oil Company, one of the subsidiaries of Tide Water Associated Oil Company, had net profits of $1,865,396 first three months of 1936, equivalent to 85 cents a share on the 2,194,773 no par common shares outstanding. That compared with profit of $571,006 in the first three months last year, or 15 cents a share, after dividend requirements on the preferred stock that subsequently was redeemed. Tide Water Oil Company directors have declared a dividend of 50 cents a share on the common stock payable May 11 to stockholders of record May 1.

Associated Oil Company, the other subsidiary of Tide Water Associated Oil Company, has reported net profit in this year's first quarter of $926,799

[*Continued on page 47*]

CRUDE OIL PRICE QUOTATIONS

(Figures Represent Basic or Flat Prices—Revised to April 24, 1936)

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Oklahoma-Kansas	28—$0.94	2¢	40—$1.18	1- 9-36
N. and N.-C. Texas	28— 84	2¢	40— 1.08	1- 9-36
Texas Panhandle				
Gray County	34— .86	2¢	40— .98	1- 9-36
Carson-Hutchinson	34— .81	2¢	40— .93	1- 9-36
West Texas				
Ector, Pecos, W'kler Crane, Upton, Howard and Glasscock	29— .76	2¢	36— .90	1-14-36
West Central Texas	28— .84	2¢	40— 1.08	1- 9-36
East Central Texas	28— .91	2¢	40— 1.15	1- 9-36
East Texas	*1.15			1- 9-36
Talco	* .60			4-15-36
Texas Gulf Coast				
Anahuac-Dickinson	30— 1.04	2¢	40— 1.24	1- 9-36
Conroe	35— 1.24	2¢	40— 1.34	1- 9-36
Tomball	*1.30			1- 9-36
Cleveland	*1.00			1-11-34
†Goose Creek, Hull Liberty, Orange, Pierce Junction, Moss Bluff, Raccoon Bend, Sour Lake, Spindletop, Sugarland, West Columbia, Humble, Rabbs Ridge	Below 17— .88	2¢	34— 1.22	1- 9-36
South and S. W. Texas	Below			
Refugio (Light)	17— .88	2¢	34— 1.22	1- 9-36
Refugio (Heavy)	*.90			1- 9-36
Saxet	*.90			1- 9-36
Mirando	*.85			1- 9-36
Pettus	*1.25			1- 9-36
Salt Flat	*.97			1-14-36
Darst Creek	*.97			1-14-36
Port Lavaca	*.97			
Plymouth	*.90			12-17-35
Arkansas				
El Dorado (Light) and Rainbow	25— .78	2¢	40— 1.10	1-10-36
El Dorado East Field and Smackover	*.75			1-10-36

* All gravities—flat rate.
† Gulf Coast prices as posted by Humble Oil & Refining Company.

DISTRICT	Low Grav.	Dif.	High Grav.	Date
North Louisiana	25—$0.78	2¢	40—$1.10	1-10-36
Urania	*.97			1-10-36
South Louisiana	Below			
Lockport	19— .92	2¢	34— 1.22	1- 9-36
Iowa, Cameron Mds.	Below 19— .82	2¢	34— 1.12	1- 9-36
Rocky Mountain States				
Salt Creek	29— .94	2¢	40— 1.18	1-10-36
Elk Basin	*1.28			1- 9-36
Grass Creek (Light)	*1.28			1- 9-36
Grass Creek (Heavy)	*.58			1- 9-36
Big Muddy	*1.11			1- 9-36
Rock Creek	*1.12			1- 9-36
Sunburst	*1.25			1- 9-36
Lance Creek	*.90			1- 9-36
Osage	*1.08			
Cat Creek	*1.07			8-25-33
Cut Bank	*1.45			9-29-33
Pondera	*1.05			9-29-33
Hog Back, N. M.	*1.00			9- 8-33
Lea County, N. M.	*.75			9-29-33
Mid-West States				
Lima	*1.25			1-10-36
Illinois	*1.23			1- 9-36
Princeton	*1.23			1- 9-36
Western Kentucky	*1.23			1- 9-36
Pennsylvania				
Bradford	*2.45			1-13-36
Sw. Pa. Pipe Line	*2.17			1-13-36
Eureka Pipe Line	*2.12			1-13-36
Buckeye Pipe Line	*1.97			1-13-36
Corning Grade	*1.42			1-13-36
Michigan				
Central Michigan	*1.12			11- 7-35
Muskegon	*.70-1.00			12-31-32
Canada				
Petrolia	*2.10			9- 9-33
Oil Springs	*2.17			9- 9-33

* All gravities—flat rate.
‡ Average price, all oil sales being to small refineries.

MAJOR PRICE CHANGES

	Penna. (Nat. Tr.)	Mid.-Cont. (36 Gr.)	Calif. (26 Gr.)
June 19, 1933	Up 10	Up 15	
June 26, 1933	Up 10		Up 9-12
July 6, 1933	Up 13	Up 10	
July 17, 1933	Up 15		
July 28, 1933	Up 15		
August 11, 1933	Up 10		
August 24, 1933		Up 10	
August 30, 1933	Up 15		
September 6, 1933	Up 10	Up 10	Up 15
September 8, 1933		Up 15	
May 1, 1934	Up 10		
November 6, 1934	Cut 25		
December 6, 1934	Cut 25		
January 4, 1935	Up 15		
February 4, 1935	Up 15		
May 16, 1935	Cut 15		
June 26, 1935	Cut 15		
July 16, 1935	Cut 10		
August 29, 1935			Cut*4
September 6, 1935	Up 5		
October 29, 1935	Up 15		
November 1, 1935			Up°28
November 18, 1935	Up 15		
December 6, 1935			Up °9
January 9, 1936		Up 10	
January 13, 1936	Up 15		
February 26, 1936			Up '5

CRUDE PRODUCTION TAXES

Oklahoma—Five percent of gross value less royalty interest.

Texas—Two cents or 2 percent, whichever is higher.

Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 percent of gross market values.

Montana—Two percent of gross value at well and ⅓ of 1c per barrel.

Wyoming and New Mexico—Production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

* All gravities—flat rate.
° Signal Hill 26 gravity.
' Seal Beach 26 gravity.

CALIFORNIA OIL PRICES

(All gravities above those quoted take highest prices of that field. Effective February 26, 1936)

Gravity	Signal Hill*	Seal Beach Alamitos Heights*	Huntington Beach*	Inglewood	Playa Del Rey*	Olinda Brea Canyon	Athens Rosecrans	Elwood Terrace	Torrance	Richfield	Whittier East Coyote La Habra	Montebello	West Coyote Hills	Santa Fe Springs*	New Hall McKittrick Kern River Round Mountain	Mountain View	Midway-Sunset Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge
14-14.9	$.80	$.79	$.78	$.79	$.80	$.76	....	....	$.80	$.76	$.76	$.77	$.78	.....	$.70	....	$.70	$.70	$.70	....
15-15.9	.80	.79	.78	.79	.80	.76	....	....	.80	.76	.76	.77	.78	.....	.70	....	.70	.70	.70	....
16-16.9	.80	.79	.78	.79	.80	.76	....	....	.80	.76	.76	.77	.78	.....	.70	....	.70	.70	.70	....
17-17.9	.80	.79	.78	.81	.80	.76	....	....	.80	.76	.76	.77	.78	.....	.70	....	.70	.70	.70	....
18-18.9	.80	.79	.78	.84	.80	.78	....	....	.82	.76	.76	.77	.78	.....	.70	....	.70	.70	.70	....
19-19.9	.82	.79	.82	.87	.84	.81	....	....	.85	.76	.78	.77	.78	.....	.70	$.70	.74	.74	.71	$.70
20-20.9	.85	.79	.85	.90	.88	.84	....	....	.88	.78	.82	.77	.80	.....	.....	.70	.78	.78	.72	.70
21-21.9	.88	.79	.89	.93	.93	.88	....	....	.91	.80	.85	.77	.84	.78	.....	.73	.82	.82	.74	.70
22-22.9	.92	.82	.92	.96	.98	.92	....	....	.93	.84	.89	.79	.88	.78	.....	.77	.87	.86	.78	.72
23-23.9	.95	.86	.96	.99	1.02	.96	$.84	....	.96	.88	.93	.82	.92	.78	.....	.80	.92	.90	.82	.76
24-24.9	.99	.91	1.00	1.02	1.06	.99	.88	....	.99	.91	.96	.85	.96	.82	.....	.84	.97	.94	.86	.79
25-25.9	1.03	.95	1.03	1.05	1.11	1.03	.93	....	1.02	.95	....	.89	.99	.86	.....	.88	1.01	.98	.90	.83
26-26.9	1.06	1.00	1.07	1.09	1.16	1.06	.98	....	1.05	.98	....	.92	1.03	.90	.....	.91	1.06	1.02	....	....
27-27.9	1.10	1.05	1.11	1.12	....	1.10	1.03	....	....	1.02	....	.96	1.06	.95	.....	.95	1.10	1.06	....	....
28-28.9	1.14	1.10	1.14	1.15	....	1.14	1.07	....	....	1.06	....	.99	1.10	.9b	.....	.99	1.15	1.10	....	....
29-29.9	1.17	1.15	1.18	1.18	F.O.B.	1.17	1.12	....	....	1.09	....	1.03	1.14	1.08	.....	1.02	1.20	1.14	....	....
30-30.9	1.21	1.19	1.22	1.21	Pipe	1.21	1.17	F.O.B.	....	....	....	1.07	1.17	1.08	.....	1.06	1.25	1.18	....	....
31-31.9	....	....	....	1.24	Line	1.24	1.22	Ship	Kettleman Hills			1.11	1.21	1.12	.....	1.09	1.29	....	....	....
32-32.9	....	....	....	1.27	....	1.27	1.27	....				1.14	1.25	1.16	.....	1.13	1.34	....	....	....
33-33.9	....	....	....	....	....	....	1.32	$1.28		1.19		1.18	1.28	1.20	.....	1.17	1.38	....	....	....
34-34.9	....	....	....	....	....	....	1.37	1.32	....	1.23	....	1.22	1.32	1.25	.....	1.20	.....	....	....	....
35-35.9	....	....	....	....	....	....	1.42	1.35	....	1.27	....	1.25	....	1.29	.....	....	.....	....	....	....
36-36.9	....	....	....	....	....	....	1.46	1.39	....	1.31	....	1.29	....	1.33	.....	....	.....	....	....	....
37-37.9	....	....	....	....	....	....	1.51	1.43	....	1.35	....	1.32	....	1.37	.....	....	.....	....	....	....
38-38.9	....	....	....	....	....	....	1.56	....	....	1.39	....	1.36	....	1.42	.....	....	.....	....	....	....
39-39.9	....	....	....	....	....	....	1.61	....	....	1.43	....	1.40	....	.....	.....	....	.....	....	....	....
40-40.9	....	....	....	....	....	....	1.66	....	....	....	....	1.43	....	.....	.....	....	.....	....	....	....

* Price effective March 6, 1936.

Edited by
WM. V. GROSS, Associate Editor

Barco Concession Sale

NEW OWNERS WILL DRILL AS SOON AS DEAL IS FINALED

SOCONY-Vacuum Corporation and The Texas Corporation will proceed at once with exploration and development work on the Barco concession in Colombia, South America, as soon as negotiations whereby these two obtain stock of South American Gulf Oil Company operating in Colombia are completed, according to a telegram received April 23 by THE OIL WEEKLY from T. Rieber, president of The Texas Company.

Rieber's telegram was substantially as follows:

"Socony-Vacuum Corporation and The Texas Corporation are jointly negotiating for purchase of stock of South American Gulf Oil Company operating in Colombia, South America.

"The purchase would include the principal interest in the so-called Barco concession, which consists of about 500,000 acres in northeastern Colombia.

"Socony-Vacuum Corporation and The Texas Corporation will participate equally in this purchase and will proceed at once with exploration and development of the territory.

"The Barco concession was acquired in 1918 by a subsidiary of Colombian Petroleum Company of Delaware. Seventy-five percent of the stock of the latter was purchased in 1925 by South American Gulf Oil Company. Negotiations with the Colombian government relating to the validity of the concession resulted in a new agreement with the government in July, 1931. Persuant to this agreement, Colombian Petroleum Company was given a concession for the exploration and exploitation of oil in the concession's area.

"In addition, South American Gulf Oil Company was given a concession to construct a pipe line to seaboard to transport oil produced on the Barco concession.

"At present South American Gulf Oil Company owns about 79 percent and Carib Syndicate Limited owns about 21 percent of the outstanding stock in Colombian Petroleum Syndicate.

"The concession agreement calling for payment of a royalty to the Colombian government is for a term of 50 years from 1931," Mr. Rieber's telegram ended.

Drilling started about April, 1935, in the northern part of the Barco concession in what is known as the Rio de Oro (River of Gold) area, the area in which Gulf Oil Corporation's subsidiary has been most active in the past 12 months. Late in April, 1936, Oro 2, a wildcat being drilled on this structure was reported drilling near 6400 feet. The original objective depth was 6000 feet. A show of oil and gas was reported at 6318 feet.

The above deal does not involve the entire Barco concession, as the whole area is said to consist of about 2000 square miles. Other interests are active, however, in the southern portion of the concession.

In a recent address to stockholders of American Maracaibo Company, which incidentally owns production in West Texas also, Frederick R. Ryan, president, stated most of the activity on the Barco concession to date had been concentrated in the southern portion thereof, in Petrolea field, where nine out of 11 completions have resulted in commercial producers. There are said to be three domes at Petrolea. The oil there ranges from 40 to 48 degrees A.P.I. gravity.

Barco concession may be roughly described as lying along (near) the boundary line of Venezuela between San Miguel river and San Miguelito canyon. Following the crest of a mountain range it extends to Aguas Calientes canyon.

SWISS WILDCAT
Test will be put down in Neuchatel lake area

Neuchavant Company recently commenced preliminary preparations for drilling a wildcat at Cuarny, near Yverdon, in the district of Neuchatel lake, Switzerland, according to a communication received by THE OIL WEEKLY from Zurich last week.

Neuchavant Company is reported to be one of the three or four companies organized in Switzerland by a Mr. Vingerhoets, who has been active in obtaining concessions in the neighborhoods of Neuchatel and Vaud.

Additional activity may start in Switzerland soon as a result of discovering traces of petroleum seepages 30 kilometers from Bale and a few kilometers from the Swiss-French border by workers during a road construction job. Capable technicians, principally from Pechelbronn, were called to the scene and it was decided to test the spot for commercial possibilities.

The Swiss government established recently a commission charged with determining whether the country possesses any petroleum reservoirs which would permit economic exploitation. The commission is composed largely of geologists who have had oil company experience abroad and is extremely active, the letter states. A majority of the members of the commission are of the opinion Switzerland has no crude oil reservoirs.

SUEZ TRAFFIC DOWN
Shipments through canal drop 1,190,492 tons

TANKER traffic through the Suez Canal during 1935 showed a decline of 166 transit and 1,190,492 net tons, or 667,566 deadweight tons, as compared with traffic through the canal in 1934, according to figures prepared for THE OIL WEEKLY by Horace Remillard of Cairo, Egypt.

Most of the decrease in shipments of crude and refined products was found in the northbound traffic, that is, traffic bound from East Indies and the Near East to ports in England and Continental Europe. But southbound traffic showed a decline also.

While tankers flying the British flag still constitute better than 66 percent of those carrying cargoes of crude and petroleum products through the Suez, there was a noticeable increase in 1935 in the number of tankers flying the Italian flag, due, supposedly, to increased demands resulting from the war in Ethiopia. Italian southbound tankers through the canal totaled only three in 1934. The year just closed saw that number increased to 21.

Northbound shipments during 1935, as compared with the same returns of 1934, showed a decline of 81 transits and 1,345,281 deadweight tons of cargo transported through the Suez Canal. During 1935, there were 466 tankers which carried 4,076,264 deadweight tons of mineral oils, as against 547 tankers transporting 5,421,545 deadweight tons during 1934.

Of the northbound shipments, amounting to 4,076,264 deadweight tons during 1935, 3,443,993 deadweight tons originated at Abadan, 112,459 deadweight tons at Suez and the remainder of 519,812 deadweight tons at various other ports beyond Suez, principally the Dutch East Indies. The bulk of the mineral oil was in destination for Great Britain, France. Germany, Belgium,

Italy, Malta, Tunisia, Egypt (Port Said and Alexandria), Netherlands, etc.

B. Southbound

In spite of the decline recorded in northbound shipments of mineral oils passing through the Suez Canal during 1935, southbound bulk cargoes increased by 21 transits and 100,930 deadweight tons, as compared with the parallel returns for 1934. In 1935, there were 81 bulk cargoes of 678,335 deadweight tons of mineral oils passing through the Suez Canal southbound, as against 60 bulk cargoes of 577,405 deadweight tons.

Of the 678,335 deadweight tons of mineral oil which passed through the Suez Canal during 1935 southbound, 76,016 deadweight tons originated at Curacao, Dutch West Indies, and the remainder of 602,319 deadweight tons principally from Soviet Russia. Mineral oils southbound were principally in destination for Indian ports and Vladivostok. Curacao shipments were intended for Suez.

PRODUCTION UP

International gaining in Colombia and Peru

International Petroleum Company is showing a substantial gain in South American crude oil production. Crude production of this company during the first quarter of the current year totaled 8,196,524 barrels, as against 7,814,989 barrels during the first quarter of 1935. Production for the first quarter this year consisted of 3,489,883 barrels from Peruvian fields and 4,706,641 barrels from Colombian fields. The courrent production trend of the South American leases is upward, March production amounting to 2,789,489 barrels as compared with a production of 2,602,213 barrels.

International Petroleum Company has established quite a reputation in South American oil circles for efficient lease operation and repressuring on the technical side and for employee welfare activities on the public relations side.

BRINE TAX THREAT

Pollution of streams is protested by two cities

Mt. Pleasant, Mich. — Threats to push for a "brine tax" were made in a meeting in Saginaw, Michigan, the past week of the Saginaw Valley Water Authority Association unless greater control of oil field brine is exercised.

Chief protests came from water department officials of Saginaw and Bay City, cities at the outlet of the Tittittabbawasse River.

The Saginaw Valley Water Authority Association meeting again centered protests against the oil industry as responsible for river brine pollution. Henry G. Hunt, Oil and Gas Association secretary, asserted that every possible step is being taken to control oil field brine and that definite progress has been made the past two years.

R. G. HOLLAND, formerly with Standard Oil Company of Venezuela, is now an engineer for Carter Oil Company at Tulsa.

Earnings Higher

[*Continued from page 44*]

or 40 cents a share on the 2,290,412 shares of $25 par value common stock outstanding. That compared with net of $932,300 or 41 cents a share in the first three months of 1935.

Texas Pacific Doing Better

Texas-Pacific Coal & Oil Company reported for the first quarter of 1936 net income before depreciation and depletion of $235,736, compared with $62,409 in the similar quarter of 1935. It reported net to surplus after making all charges amounted to $138,499, compared with a deficit of $55,806. For the second quarter of 1936 net income is expected to run well ahead of these figures, as a considerable part of the increased production was drilled in near the end of the first quarter. Better earnings were attributed primarily to increased production, which includes properties in several West Texas fields. Better prices also were instrumental, however, as were lower expenses in refining and marketing. Officials of the company have indicated that further drilling plans, yet to be determined, will influence action on payment of dividends. At the company's recent annual meeting of stockholders it was reported that 1935 brought increases in earnings, production, and cash on hand, and that further gains in these items had occurred in the first quarter of 1936. All officers were re-elected. The only change in the directorate was replacement of C. H. Osmond of New York by L. A. Green, Fort Worth oil man.

Best Initial Quarter in Decade

It is indicated that Standard Oil Company of Ohio earned around $700,000, or about 70 cents a share on the common stock, after preferred dividends, during the first three months of 1936. This was the first initial quarter in about 10 years that the company showed net profit, marketing operations usually having been at the year's low ebb in that period. In the first three months of 1935 the company reported a deficit of $632,207. This year's first quarter profit was the equivalent of about one fourth of the earnings for the whole year of 1935. In 1934 the company had a substantial net loss. Improved earnings this year reflected better product prices, and also the change in marketing policy through which the company has begun operating more and more leased stations.

Gains Are Expected

It is unofficially stated that Phillips Petroleum Company in the first three months this year had about twice as much profit as the 37 cents a share earned in the similar period last year. The Texas Corporation also has had much improved earnings this year as compared with last year. Socony-Vacuum Oil Company, Inc., has had larger sales this year than last year, and it is indicated that the company in this year's first quarter will show net profit, as against a deficit in the similar period a year ago.

Pacific Western Oil Corporation is expected to report 1935 first quarter net income of somewhat over 25 cents a share on its 1,000,000 shares of no par common stock outstanding, in view of the receipts of a dividend on its holdings in Tide Water Associated Oil Company in January. In the initial quarter of 1935 Pacific Western reported net profit of $154,281, or 15 cents a share on common stock.

Union Oil Profit Lower

Reflecting the adverse market conditions in the Pacific Coast region the early part of this year, Union Oil Company of California for the first quarter reported net profit of $400,000 or 9 cents a share on 4,386,070 shares of $25 par value capital stock, compared with a similar net income last year of $1,350,000, or 31 cents a share. In the similar period of 1934 the profit was $500,000.

Mid-Continent Income Up Sharply

For the first quarter this year Mid-Continent Petroleum Corporation will report a substantial profit, compared with a loss in the similar period last year, according to Jacob France, president. The improvement is attributed to gains in all departments of the company's business and to better prices for refined products. For 1935 the company reported net income of $2,417,175, or $1.31 a share on 1,843,872 shares of $10 par value capital stock, exclusive of 14,140 shares held by the company. The 1935 profit was the largest since 1929, and compared with $828,093 or 45 cents a share in 1934.

More Annual Figures

Additional figures have been released lately on earnings of oil companies in 1935. Similar figures on other companies have appeared in these columns in recent weeks.

Indian Refining Company and subsidiaries, controlled by The Texas Corporation, reported for 1935 a net profit of $1,351,806, compared with net loss of $885,158 in 1934.

Imperial Oil, Ltd., controlled by Standard Oil Company of New Jersey, reported for 1935 net income of $25,229,850, or 93 cents a share on 26,965,078 no par shares of capital stock. That compared with profit of $25,771,654 or 96 cents a share in 1934.

Amerada's Record Best Since 1930

Amerada Corporation's annual report for 1935 showed the highest net income since 1930, as well as an increase in crude production. The profit for 1935 was $1,797,613 or $2.28 a share on the common stock, compared with $1,736,420 or $2.20 a share in 1934, and with $380,443 in 1933. Net crude production in 1935 was 7,799,031 barrels or 21,367 barrels daily, compared with 6,677,824 barrels or 18,295 barrels daily in 1934.

Standard of California

Standard Oil Company of California had about the same sales volume in 1935 as in 1934, and net profit for 1935 was $18,594,330, compared with $18,327,807 in 1934. Domestic crude production of the company and its subsidiary, California Company, operating in Texas, New Mexico, Montana, and

Wyoming, aggregated 44,539,848 barrels in 1935, a daily average of 122,027 barrels, of which 108,640 barrels daily was produced in California. This represented an increase of 18,969 barrels daily or 18.4 percent over the production in 1934. The company now has 19 producing wells at Bahrein Island, Persian Gulf, six having been completed the past year. In 1935 the production there was held to sales requirements of 1,264,809 barrels.

Tide Water Associated Oil Company and subsidiaries for 1935 reported net income of $7,865,701, against $5,810,657 in 1934. After preferred stock dividend requirements of $3,757,326, the 1935 net income allowed $4,108,375 or 73 cents a share net income applicable to the common stock, compared with $1,993,-331 or 35 cents a share in 1934. Higher crude production and sales of products were largely responsible for the improvement.

Tide Water Oil Company and subsidiaries for 1935 showed net income of $5,885,925, equal after dividends on preferred stock, now retired, to $2.35 a share on the common stock. That compared with $4,386,312 or $1.55 a common share in 1934.

Associated Oil Company and subsidiaries for 1935 reported net profit of $3,067,882 or $1.34 a share, compared with $2,630,615 or $1.15 a share in 1934.

Best Year Since 1930 for Indiana

Standard Oil Company (Indiana) and subsidiaries reported for 1935 highest net profit since 1930, with sales about 10 percent larger than in 1934 and with its own crude production up 35 percent. The year's profit in 1935 was $30.-179,895 or $1.98 a share, compared with $18,949,680 or $1.25 a share in 1934. The company's domestic crude production in 1935 aggregated 19,316,633 barrels, compared with 14,205,530 barrels in 1934. The 1935 production was 30 percent of the company's requirements. Runs to refineries amounted to 66,520,-212 barrels, compared with 57,294,427 barrels in 1934. It is being predicted in some quarters that the company may begin paying higher dividends this year. Since September 15, 1931, the company has paid 25 cents a share quarterly. Previously, it was paying 50 cents.

Royal Dutch Output Higher

Unofficial information from Amsterdam indicates that the Royal Dutch-Shell group in 1935 produced about 26,445,000 metric tons of petroleum, or 11.6 percent of the world production of 228,000,000 metric tons. In 1934 the group produced 24,078,062 tons or 11.6 percent of the world total of 208,547,793 tons, while in 1933 the group's share was 21,953,478 tons or 11.3 percent of the world output of 197,696,164 metric tons. Since 1933 the company's output has increased 20 percent and since 1932 by 25 percent. Venezuela continues the leading source of production. The group's share in United States crude production in 1935 was about 5 percent, compared with about 4 percent in 1934. It is indicated the group's earnings were somewhat better in 1935 than in 1934, with production higher and prices steady, although expenses have increased. Dividend of 6 percent was paid in 1933, and payments increased to 7½ percent in 1934. It is expected that a further increase of the dividend may apply for 1935.

Skelly Oil Company stockholders will vote May 1 at a meeting in Tulsa on an issue of 100,000 to 120,000 shares of new preferred stock of no par value. It is contemplated that the new issue would replace the present outstanding 66,300 shares of 6 percent cumulative preferred stock on which unpaid dividends amounting to $29.50 a share were shown as of March 31, 1936. That stock is redeemable at $103 a share plus accrued dividends on any dividend date.

Gulf Changes Name

Directors of the Gulf Corporation of Pennsylvania have shortened the concern's name to Gulf Oil Corporation, although it will remain a Pennsylvania corporation. The company operates in over 30 states; hence the change of name. The directors also received a report showing that net income for 1935 was $10,551,720, equal to $2.32 a share, compared with $2,811,183 or 62 cents a share in 1934. Net production for 1935 was 53,273,155 barrels, or 3,688,938 barrels more than in 1934. Funded and long term debt was lowered $3,175,235 in 1935, to a total of $71,766,000 funded debt and $14,600,000 long term notes, exclusive of $3,400,000 notes due this year, which are included in current liabilities.

At the annual meeting of Seaboard Oil Company, John N. Lovejoy described the company's first quarter operations as "very satisfactory." He indicated the company was producing more oil and getting little higher average price. The company's activities in Venezuela have resulted in production of some oil, but not in commercial quantities.

Large Gathering

TULSA TO BE HOST TO MANY OIL MEN DURING MAY

Tulsa.—The largest gathering of oil men in the history of the industry probably will assemble in Tulsa during May. There have been notable and largely attended conventions of oil men in the past, but never before have all these groups assembled in one spot at the same time as they will in Tulsa for numerous conventions and the International Petroleum Exposition, May 16 to 23.

These meetings include national conventions of the Natural Gasoline Association of America, the American Petroleum Institute, the Independent Petroleum Association of America, the National Stripper Well Association of America, and the first American meeting of the Institute of Petroleum Technologists, which maintains headquarters in London. Various committee and group meetings are scheduled in addition to the larger conventions.

Another and more important reason for the gathering will be the largest and most all-embracing show of new equipment and methods ever held. Another is the fact that many leading associations of oil men have purposely timed their important national and regional conventions to be held in Tulsa immediately preceding or during the exposition.

Five hundred and twenty-six firms, representing the bulk of all manufacturing and scientific concerns catering to the varied needs of the industry, have bought space and will have $10,000,000 worth of exhibits on the 20-acre exposition site when the gates are formally opened Saturday, May 16. Some of them are spending small fortunes upon the preparation of these exhibits. Machinery will be glorified this year as never before. Everything that's new in all branches of the oil industry will be shown, most of it in operation under conditions simulating actual field or plant practice. Some exhibitors, such as the United States Steel Corporation, National Tank Company and Frick-Reid Supply Company have had workmen on the exposition site for many weeks preparing the most elaborate presentations of their history, and even erecting their own buildings for the purpose.

The trend this year is for real beauty in designs and color schemes. The exposition itself has fallen into line by beautifying the grounds, repainting all buildings and making the interior treatment of the exhibit buildings more pleasing on the eye than ever before. All exposition employees will wear uniforms this year for the first time—dazzling utilitarian creations of bright green and red.

A safety meet will be held with crack teams representing many oil firms competing and demonstrating the latest methods in saving and conserving life and health.

The inventors of all sorts of new devices and gadgets will have a field day through a special department created for them this year for the first time. A committee headed by B. W. Logue of The Texas Company has spent months and is still engaged in considering inventions that have been submitted for exhibition in this department.

M. M. Kinley will again be on hand this year to personally direct his highly trained crew in fighting an actual oil well fire in front of the big fairgrounds grandstand adjoining the exposition grounds. This spectacular demonstration by the acknowledged leader in his highly specialized line of work will take place on Sunday and Wednesday nights, May 17 and 20.

The sentimental and historic side of the industry will have its full measure of recognition. A special historical committee, headed by Victor Barnett, is seeing to that. The custom of selecting at each exposition a "grand old man" of the industry and a "grand old man" of Tulsa will be revived. Applications for these honors from sponsors and friends of pioneers in the industry are still being received at exposition headquarters. To qualify as the

"grand old man" of the industry one must have been engaged in the oil business for 50 years or more and have contributed to its advancement by personal example, inspiration, invention or discovery. The "grand old man" of Tulsa must have been actively engaged in the industry for at least 30 years, 20 years of which must have been spent in Tulsa. Otherwise the qualifications are the same as for the "grand old man" of the industry. Gold medals will be awarded to the winners in appropriate ceremonies at the exposition on Sunday, May 17. The pioneers will all be guests of the exposition at luncheon that day.

A movement will be launched at this year's show to build a permanent memorial to the pioneers of the industry. It will be located on or adjacent to the exposition site and may be a monument, or something utilitarian. A sub-committee is now working out plans for a contest to select the type and form of memorial and these will be announced during the exposition by means of a special display inside the replica of the rig that drilled the Drake well. A permanent museum to house models of methods and equipment used from the beginning of the industry until the present day will begin to take form at this year's show.

CALIFORNIA FORUM

Roeser and Fell discuss situation at meeting

LOS ANGELES.

AT the monthly open forum for oil men of California at noon April 24, Charles F. Roeser, president and H. B. Fell, executive vice president, of the Independent Petroleum Association of America were the featured speakers.

Roeser discussed imports of crude oil and suggested that such movement should not exceed 4½ percent. He favors orderly development of new oil fields, pointing to success in Texas along this line. Stability of industry depends upon balancing of demand against production, he thought, and reviewed success of proration in the East Texas field in its early days. He referred to recommendations of the Bureau of Mines as to daily production by states, and said he felt such figures should be accepted. He further called attention to fact that deeper drilling increases cost and also increases lifting costs.

Fell discussed the situation at Washington and in Congress, telling of steps being taken by his organization. He touched lightly on the asphalt situation, offering to assist the independent operators of California at any and all times.

Victor C. Svimonoff, petroleum engineer, educated in Russia, but now a citizen of the United States, who introduced rotary drilling in Russia, discussed various phases of the industry, comparing operations and progress in the United States compared to Russian operations.

FERRIS HEFFINGTON, scout for Magnolia Petroleum Company in Southwest Texas, has been transferred from San Antonio, to Mount Pleasant, where the company has established an office in connection with the pending drilling campaign in the Talco area, Northeast Texas. He has been succeeded at San Antonio by K. V. Fritts, who formerly scouted in the Perry, Oklahoma, district.

Little Importance

SOONER DEVELOPMENTS ARE LACKING IN INTEREST

WEEKLY STAFF REPORT

Tulsa.—Governor E. W. Marland's victory in the Oklahoma City drilling zone war and the continued march of derricks northward toward city limits was the highlight in Oklahoma news during the past week although a number of important wildcat tests failed to reach objectives or were drilling at uninteresting depths. A test east of the Olympic pool found gas in an upper zone and may extend that area into a next township although evidence points to the belief of a separate structure. At present exploratory work does not seem to be retarded due to water shortage but in the event that the next few weeks do not bring considerable rain a general slowing down may be expected. The great rush of new work in the north end of the Oklahoma City area is taxing the municipal water supply and many of the new operations may have to arrange for supplies other than from the city.

Twenty-five first reports in the "Mansion Area" of the Oklahoma City pool and two in the Edmond pool placed Oklahoma County far out in the new-work lead during the past week. Despite the concentration of activity in this part of the state the 88 first reports which represented total new work in the state came from 20 counties. Osage and Pontotoc Counties were tied for second place with eight first reports each; Okfuskee and Seminole Counties had seven each; Hughes County, six; Okmulgee County, four; Carter, Creek and Pottawatomie Counties, three each; Payne and Stephens Counties, two each; and Atoka, Cleveland, Lincoln, Marshall, McIntosh, Noble, Pawnee and Tulsa Counties, one each.

Operations Grow

NORTH OKLAHOMA CITY HAS CLOSE TO 200 TESTS

Oklahoma City.—Around 200 operations were underway in the "Mansion Area," or north end of the Oklahoma City pool, as the week came to a close and requests were still being filed for permits to drill. Barnsdall Oil Company's Banks-Geyer 1, SE SE SW SE 15-12n-3w, one quarter-mile northwest of the nearest production, was a key test being closely watched as it cored to find top of the Wilcox sand at around 6430 feet. Should the sand be found at near this depth the test will check normal with the nearest producing well.

A check of operations early in the week revealed definite reports on 118 tests. Of this number seven were locations, 14 were digging cellars or had cellars completed, 18 were building derrick or had derricks completed, 11 were shut down waiting on cement to set on surface pipe, four were shut down pending arrangements for water supply, and 64 were moving in tools, rigging up or drilling. Of the drilling wells 19 were between the surface and 1000 feet, 17 were between 1000 and 2000 feet, 14 between 2000 and 3000 feet, 14 between 3000 and 4000 feet, five between 4000 and 5000 feet, four between 5000 and 6000 feet and two below 6000 feet and nearing the sand.

In the Britton area immediately north of Oklahoma City in northwestern Oklahoma County, Slick-Urschel Oil Company et al's McGrew 2, SE SW SW 20-13n-3w, in the North Britton pool and an offset to the largest producer in the pool, had been drilled to 6600 feet and was waiting on cement to set after running casing to 6533 feet. In the northeastern part of the pool, Sinclair Prairie Oil Company et al's Corbett 1, NE NW NE 17-13n-3w, flowed 240 barrels of oil in 24 hours with tubing set at 6398 feet. The same operators' Kindblade 1, SE NE SW 17-13n-3w, was drilling below 2270 feet and Susie Dills 1, NE NE NW 17-13n-3w, was below 4660 feet. Marathon Oil Company's Winters 1, SW SW NW 20-13n-3w, was drilling below 5355 feet and Clinkscale and Brown's Myers 1, NW SE SE 17-13n-3w, was below 5700 feet.

Pure Oil Company drilled plugs late in the week at Berquist 1, SW SW SE 30-14n-3w, in the northern part of the Edmond pool of northwestern Oklahoma County. Depth is 6157 feet with seven-

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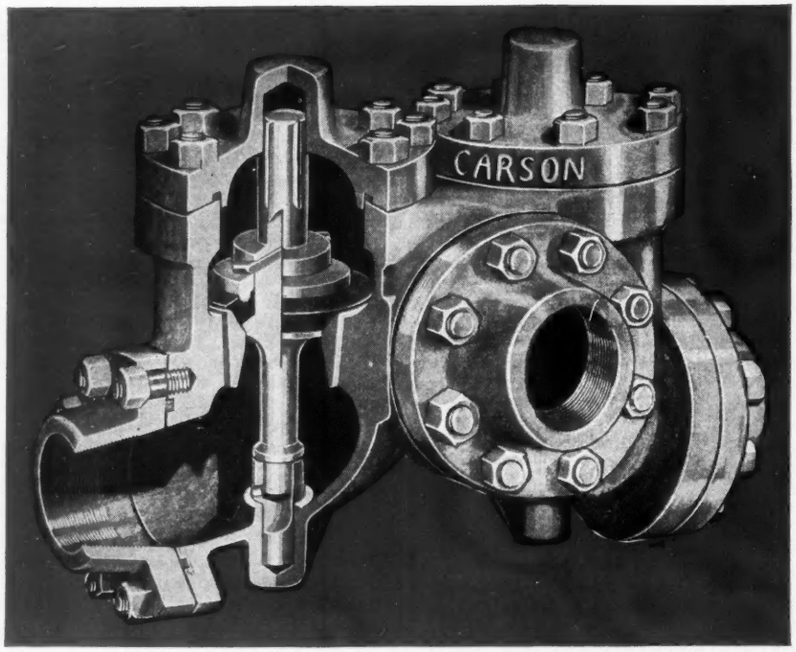

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inch casing cemented at 6145 feet. The same operator's Malm 7, SW NE SW 30-14n-3w, was drilling below 5990 feet; Malm 8, NE SW SW 30-14n-3w, was below 4220 feet; Continental Oil Company's Young 7, NE NW NW 31-14n-3w, was drilling below 4900 feet; and Young 8, NW SE NW 31-14n-3w, was drilling below 1935 feet. In the southern part of the pool Marathon Oil Company's Rankin 2, NE SE SW 31-13n-3w, was drilling below 4600 feet. The same operator's Messer 2, NW SW SW 32-14n-3w, north offset to the discovery well, was rigging up rotary tools.

JESSE RECLASSIFIED

Ada.—The Jesse pool of southeastern Pontotoc County has been reclassified from Class D to Class C by an order of the corporation commission which covers Sections 1, 2, 3, 4, 9, 10, 11, 12, 13 and 14-1n-7e in Pontotoc County and Sections 5, 6, 7, 8, 9, and 18-1n-8e, in Coal County. Under the new classification operators will be required to take potential gauges through tubing, flowing the wells for a six-hour period and multiplying the last four hours of such gauge by six to determine the 24-hour rating. A minimum daily allowable of 75 barrels per well was prescribed. Two potentials had been completed early in the week and the third was expected to be completed before the week end. Continental Oil Company's McCarty 1, SE SE NW 12-1n-7e, the discovery well, was given a rating of 5283 barrels per day, and the same operators' Simpson 1, SW SW NE 12-1n-7e, east offset to the discovery well, was rated at 4700 barrels per day. Tubing was being run to test James 1, NE NE SW 12-1n-7e, south offset to the discovery well.

Four tests are now being drilled in the immediate vicinity of the discovery well and a fifth is shut down for orders running very low and apparently on the downthrown side of a fault. This is The Texas Company's Simpson 1, SE NW SW 12-1n-7e, three locations south and two west of the discovery well, shut down at 5655 feet. Continental Oil Company's House 1, NW NW SE 12-1n-7e, was drilling below 3900 feet; McCarty 2, NE SE NW 12-1n-7e, was below 2800 feet; and Monroe 1, NW SW NW 12-1n-7e, was below 2650 feet. Sunray Oil Company's Shumard 1, NE SW SE 2-1n-7e, approximately one mile northwest of the discovery well, was drilling below 2000 feet.

COAL WILDCAT

Ada.—Shell Petroleum Corporation's Hill 3, SE SE NW 30-3n-10e, important wildcat test, eight miles northeast of Centrahoma in northern Coal County, cored from 5946 to 5966 feet and was drilling ahead after recovering tight sandy dolomite with oil stains and an odor of gas. This test is typical of the Graben area of eastern Pontotoc County and western Coal County. After penetrating a great thickness of Atoka formation and apparently running low, it went from Atoka beds into lower Cromwell sand, missing several hundred feet of formation which normally should be present and placing it "high" as compared to the nearest reference well. Shell has a large block surrounding the test.

OKLAHOMA

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ATOKA COUNTY—		
Texas-Okla. O&G Co., Greenville Nat'l Bank 1, nw nw sw 36-2s-13e	*	2150
CARTER COUNTY—		
Carter Oil, Johnson 12, cn½ nw nw 5-4s-3w	12	949
Bullhead Oil, Dany 7, cwl nw sw 4-4s-3w	*	1110
Cox & Hammon, Mena 1, ne nw se 6-2s-2w	¶2-75	2511
Maxine Oil, Brady 2, nw nw se 5-2s-2w	*	1611
Texas Co., Cathey 1, se ne ne 6-5s-1w	25	4186
CREEK COUNTY—		
Sinclair Prairie, Jones 22, ne nw se nw 3-17n-7e (otd 2504)	31	2540
Tide Water Oil, Turnbow 15, se sw sw 12-17n-7e	*	2983
HUGHES COUNTY—		
Manahan Oil, Tucker 2, ne se se 2-9n-8e	117	1757
Sinclair Prairie, Oliphant 8, ne nw se 1-9n-8e	305	1711
Mid-Continent, Hampton 3, ne nw ne 1-9n-8e	318	1740
Canavan, Meadors 1, ne se sw 5-8n-10e (pb 3168)	¶6	3196
Shumacher et al, Schumacher 1, ne nw ne 23-5n-10e	*	1782
JACKSON COUNTY—		
Lindsey et al, Cole 1, se se nw 34-2n-20w	*	1730
JEFFERSON COUNTY—		
Long, Yingling & Lauck, Seay 16, se nw se 3-7s-5w	49	1276
KIOWA COUNTY—		
Apache Oil, Stone 1, sw nw ne 34-7n-17w	3	962
MARSHALL COUNTY—		
Kingston Oil, Felts 4, nw ne nw 6-8s-6e	*	276
Priest, Cope-Sublet 8, sw se ne 1-8s-5e	*	553
Leavell Coal, Brent 5, nw nw se 1-8s-5e	lcn.	abd.
MUSKOGEE COUNTY—		
Metzger, Field 4, sw nw ne 17-15n-17e	*	1887
OKFUSKEE COUNTY—		
O'Laughlin, Keys 2, cnl ne sw 11-11n-8e	231	3969
Hicks, Mingo 2, sw se sw 25-10n-10e	*	2635
Ralvern Oil, Hicks 1, cne se 11-11n-8e	240	3941
OKLAHOMA COUNTY—		
Marathon Oil, Dahl 10, ne se se 31-14n-3w	¶1¼	7111
Continental, Young 6, sw ne nw 31-14n-6e	¶8½-10,237	6710
British-American, Roanoke Place 1, ne ne se 22-12n-3w	¶33-26,136	6493
Powell 1, ne ne se 22-12n-3w	¶13-18,983	6462
Hays-Highland 1, se ne se 22-12n-3w	¶16½-20,658	6502
OKMULGEE COUNTY—		
Klingensmith, Farr 14, sw ne nw 35-16n-11e (otd 1891)	150	2332
Strozier, Caldson 1-A, csw ne 21-16n-11e	*	2340
OSAGE COUNTY—		
Kewanee O&G, Hale 3, se ne se 27-26n-6e	¶1-545	2945
Tidewater Oil, 2, se sw ne 9-24n-7e (pb 2600)	473	2625
Branstretter et al, 2, nw se sw 28-22n-11e	242	2085
Osage Lease Holding, 12, cs½ sw ne 6-22n-11e	*	1667
Platter 5, nw ne se nw 30-22n-9e (otd 432) (pb 432)	2	517
PAWNEE COUNTY—		
Magnolia, Miller 7, sw nw sw 4-22n-3e (otd 4074)	*	4311
Test Oil & List, Perry 1, se nw nw 9-21n-8e	2	1602
PONTOTOC COUNTY—		
Moore, Wirick 6, ne ne sw 29-2n-7e (otd 4309)	¶2-4198	4410
Magnolia, Burris "B" 3, se ne ne 28-2n-7e	¶1½-2003	4300
Fleetborn, Woolley 5, ne ne se 28-2n-7e	¶2½-3849	4270
Crosbie et al, McKoy 1, sw ne ne 28-2n-7e	¶3½-3497	4293
Samedan Oil, Holkum 2, ne sw ne 27-2n-7e	¶1-4230	4265
POTTAWATOMIE COUNTY—		
Gulf Oil, Bois-Clark 1, sw se se 21-6b-4e	*	3100
Conley, Vinson 1, ne ne ne 13-7n-4e (otd 3983)	1600	4051
PUSHMATAHA COUNTY—		
Ungerman et al, Messer 1, se sw sw 35-3s-18e	*	3560
SEMINOLE COUNTY—		
Carter et al, Bruner 3, cw½ nw ne 19-10n-6e	456	4596
Magnolia, Browning 6, cw½ nw nw 14-10n-6e	1452	4200
Carter Oil, Badger 2, cw½ sw sw 11-10n-6e	636	4207
Bruner 1, cn½ nw sw 2-10n-6e	2000	4156
Exchange Drlg, Harjo 1-A, cse sw 25-9n-6e	15	4013
Carter et al, McMann 2, se sw sw 11-9n-6e	lcn.	abd.
Jones, Shefleet 1, nw nw ne 34-8n-8e	55	4187
Pioneer O&G, Reed 1, sw sw se 27-8n-8e	720	4210
Sinclair Prairie, Harjo 2, nw nw se 12-5n-7e	1605	4257
STEPHENS COUNTY—		
Wilkins & Cooper, Crump 8, sw se se 10-2s-5w	7	858
Clyde Rhodes et al, Doak 1-A, sw sw sw 1-1s-5w	*	1803
TULSA COUNTY—		
Detmer, McIntosh 3, csl nw se 4-18n-14e	5	1445
Sinclair Prairie, Durant 13, nw nw se 3-17n-12e	*	2440
WAGONER COUNTY—		
McIntire, Martin 1, sw ne ne 34-18n-15e	*	1728
Green et al, McIntosh 1, cnw nw 7-17n-15e	*	1400
Boley, Jackson 1, cnl sw sw 3-17n-15e	*	1812

*Failures; †Junked; ¶Million cu. ft. gas.

WATER AT TIPTON

Ardmore.—Gulf Oil Corporation (Gypsy) may have to plug back to shut off water in its important Boucher 4, SE SW SW 32-1n-19w, first big production in the widely played Tipton-Altus area of southwestern Oklahoma. This new strike made 2054 barrels in 11 hours from Cisco "sand" at 2654 to 2655 feet. On April 16 the production was 1974 barrels in 12½ hours; April 17, 2102 barrels in 16 hours; April 18, 2179 barrels in 18 hours; and April 19, 1420 barrels in 10 hours, cutting 10 percent salt water and one percent mud. On the following day it yielded 105 barrels in two hours, flowing through a restricted opening. A tubing test was to be made before attempting shut off work.

The same operator's Boucher 5, NW SE SW 32-1n-19w, was drilling below 2450 feet. J. M. Young's Brisco 1, NE SW NE 36-1s-20w, was drilling below 2360 feet. To the southeast of the pool Gulf Oil Corporation's (Gypsy) Shirley 1, NE NW NE 6-1s-19w, was below 2590 feet and should be testing Cisco pay before the week end.

Oklahoma Panhandle

Cabot Carbon Company has assembled a block of approximately 2000 acres nine miles east of Guymon in east central Texas County in the Oklahoma Panhandle and is reported on a deal for leasing of the Stonebraker-Zea Ranch, a 60,000-acre block north and west of Guymon, and the Casto Ranch, a 6000-acre block 10 miles east of Guymon. Definite plans for development of the leases already taken have not been announced but the general understanding is that a wide campaign is planned with the objective of building a carbon black plant in the area which lies to the south of the great Hugoton gas field of southwestern Kansas and northern Texas County, Oklahoma. The area in which Guymon is located has produced gas for a number of years and may be an extension of the Hugoton gas structure.

WILDCAT SHOWS

Holdenville.—Stanolind Oil & Gas Company and Amerada Petroleum Corporation's Frazier 1, NW NW NW 6-9n-9e, wildcat test midway between the new Olympic pool and the old Papoose pool in northeastern Hughes County, topped sand at 1690 feet and drilled to 1745 feet where it was making about 2,000,000 cubic feet of gas and a showing of oil. The test is said to be on a seismograph "pimple" and the sand is being tentatively correlated as Sonora.

McIntosh County

Indian Territory Illuminating Oil Company was shut down for orders after getting 1200 feet of salt water in 30 minutes in Tancred 1, SW NW SE 9-9n-14e, wildcat test 13½ miles west of Eufaula in southwestern McIntosh County. Top of the Wilcox sand was encountered at 4525 feet and the first water at 4535 feet, the present total depth. The test, originally scheduled to go only to 4000 feet, is located on a surface high which was checked with seismograph. It had 25,000,000 cubic feet of gas at 2727 feet and probably will be plugged back to that point and completed as a gas well. Phillips Petroleum Company was about ready to start drilling at Tancred 1, NE NE NW 3-9n-13e, another wildcat about six miles to the west.

TRIBES SALE

Muskogee.—After getting off to a slow start the public auction of the Five Civilized Tribes held here April 22, resulted in a total bonus of $31,979.25 for 7783.48 acres or an average of $4.11 per acre. Tract No. 15; E½ SW, Lots 3 and 4 section 19-10n-9e, 158.23 acres situated about two miles west of the old Cromwell pool but over the line in southwestern Okfuskee, was the first tract to bring encouragement to the auctioneers when it was purchased by Sinclair Prairie Oil Company for a bonus of $10,126.72 or $64 per acre. This was the highest price per acre and the largest total bonus paid during the day. Lands in Carter, Atoka, Jefferson and Okfuskee Counties proved the most attractive to bidders, a total of 59 tracts being sold in these four counties.

KIOWA SALE

Andarko, Okla.—The Kiowa Agency here reported one of its most successful oil and gas lease auctions April 22, when a total bonus of $95,000 was paid for 106 out of the 134 tracts offered. The highest price was commanded by a tract in southwestern Cotton County when a bonus of $16 per acre was paid for SW12-5s-13w. Gulf Oil Corporation was the biggest buyer.

MAY ALLOWABLE

Wichita, Kansas.—Kansas oil fields will have a daily allowable of 150,100 barrels per day during May, 1936, an increase of 4100 barrels per day over the present month, according to T. A. Morgan, director of the oil and gas conservation division of the corporation commission who announced that the recommendation of the United States Bureau of Mines would be followed. Potential of the state was expected to be about 980,000 barrels per day.

Two Discoveries

NEW PRODUCING HORIZON, EXTENSION FEATURE RESULTS

WEEKLY STAFF REPORT

Wichita.—Kansas field developments the past week were unusually quiet, the highlight being a quarter-mile extension to the Richardson field and a second producing horizon in the Harbaugh field.

The Richardson pool of northeastern Stafford County was given a quarter-mile extension with completion of Stanolind Oil & Gas Company's Heyen 3-B, SW NE NE 31-22s-11w, which yielded 1153 barrels natural from Arbuckle (Siliceous) lime drilled to 3546 feet. Stanolind Oil & Gas Company is discoverer of the pool.

The new Harbaugh field of southwestern Russell County seemed assured of a second producing horizon late in the week when National Refining Company's Reinhardt 1, NW NW SE 25-14s-15w, 11 miles southwest of the town of Russell, encountered Arbuckle (Siliceous) lime at 3179 feet started filling up at the rate of 200 feet per hour. Operators planned on setting 5 3/16-inch casing on top of the lime before drilling ahead. The pool was discovered in March, 1936, when Hartman and Blair completed Harbaugh 1, NE NE SW 25-14s-15w, producing 788 barrels initially from Oswald lime topped at 2908 feet and drilled to 2950 feet, the total depth. This new producing area is in the vicinity of the Big Creek pool and may subsequently be proven to be a part of the latter. Big Creek produces principally from the Arbuckle (Siliceous) lime.

Two miles north of the old Sellens pool in the southern part of the county Sam Murphy and Phillips Petroleum Company's Anschutz 1, SW SW SW 10-15s-13w, discovery well in the new Anschutz pool, made 515 barrels in 24 hours after acid treatment. Initial tests were taken on this well several weeks ago and its yield was 230 barrels natural from Arbuckle (Siliceous) lime drilled to 3327 feet.

In the northern part of the county D. R. Lauck and Bridgeport Machine Company were trying to drill by 150 feet of drill pipe at 3460 feet in Wycoff 1, SE SE NW 27-11s-13w, 12 miles northeast of Russell and the same distance from the Russell pool which is the nearest production.

Morgan and Murphy's Robinson 1, NE NE SW 21-16s-14w, wildcat test in northwestern Barton County, encountered the Lansing-Kansas City group at 3190 feet and was drilling ahead with no showings reported. Nearest production is in the Ochs pool in southern Russell County. Northwest of the Peter pool in the southeastern part of the county Buchanan and Alexander's Langfield 1, NE NE SW 14-20s-11w, was drilling below 3025 feet with nothing showing. It had a reasonably good showing of oil higher up the hole in Dodge lime.

Although nothing tangible has been discovered in the play which Rush County has received since the first of the year, several of the seven wildcat tests now drilling in the county are reaching important depths and the area should furnish something of unusual interest soon. Shell Petroleum Corporation's Shaffer 1, C NW 22-18s-16w, east of the town of Shaffer and west of the Otis area in the eastern part of the county, was making about one-half bailer of fluid per hour from 3510 feet and at 3512 feet picked up a small showing of oil in quartzite. It was drilling ahead.

In the northeastern part of the county, Lebosquet, Kansas Oil & Gas Corporation and Rosespring Drilling Company's Jacobs 1, SW SE NW 8-16s-17w, topped the Lansing-Kansas City group at 3270 feet, had a small showing of oil and was drilling ahead below 3350 feet with no further showings reported. It is seven miles southeast of production in the Ruder pool of southern Ellis County.

E. B. Shawver and D. M. Wilt had completed cellar and pits at Z. N. Dunlap 1, Section 8-34s-3e, an offset to the recently completed Bahruth 1, SW NW NE 8-34s-3e, wildcat discovery well east of Gueda Springs in southwestern Cowley County, which was completed early in March, 1936, for 125 barrels at 3305 feet. Dunlap 1 is on a 49-acre island in the Arkansas River, it being necessary to construct a bridge in order to reach the location and transport materials to it.

Sumner County

The Wellington pool of central Sumner County was extended one location south with completion of E. B. Shawver's Erker 4, S½ NW 33-31s-1w, which flowed 1200 barrels in 24 hours from Mississippi chat drilled to 3688 feet. The Wellington pool is one of the oldest pools in central western Kansas, having been discovered by Slick, Pryor and Lockhart in December, 1929, with the completion of Peasel 1, NW NW NW 33-31s-1w, a 310-barrel well in Mississippi chat from 3655 to 3667 feet.

The past week followed the normal course when 39 first reports were made in 15 counties. Rice County took the lead with nine first reports; Barton and Russell Counties had six each; Butler County, five; Ellis and Greenwood Counties, two each; and Barber, Cowley, Ellsworth, Grant, McPherson, Reno, Stafford, Sumner and Woodson Counties, one each. This is next to the highest number of first reports made during any one week since the first of the year.

Completions showed a small increase and initial production a comfortable increase when 24 oil wells were rated initially at 32,781 barrels. Eleven dry holes and one abandoned location were included in the total of 36 completions as compared to 28 oil wells, four dry holes and one abandoned location during the preceding week. Completed footage reached the highest point of the year with a total of 136,805 feet of which 27,485 feet was in eight wildcat tests and 818 feet was in two old wells. This footage is about 33 1/3 percent over the average for 1936.

PLANS 300 WELLS

Continental laying line from Western Kansas

Ponca City.—Continental Oil Company has announced that during the next 18 months it will spend more than $12,000,000 in the Geneseo area of northern Rice County and the Mound Ridge or Graber area of southeastern McPherson County, Kansas. Although the major portion of this expenditure will be for drilling of approximately 300 wells, the plan calls for the immediate construction of an eight-inch welded pipe line from the Geneseo area, southwest to Valley Center in northern Sedgwick County, where it will tie in with an existing line and give the company an outlet from western Kansas to the refinery at Ponca City. It is estimated the line will cost about $650,000 and will have a capacity of 14,000 barrels per day with stations at Geneseo and Mound Ridge. Completion is scheduled within the next 60 days. A four-inch lateral from the Mound Ridge area will tie into the main line at a point near Burton in Harvey County.

The Geneseo area came into prominence early in 1934, when Continental Oil Company's Lansing 1, NW NW SE 25-18s-8w, discovery well in the Geneseo pool, completed May 8, 1934, for 941 barrels natural and 1113 barrels after acid treating Arbuckle lime from 3132 to 3172 feet, the total depth. Ten months later the same operator discovered the nearby Galt pool when Ferguson 1, SW NW NE 8-18s-7w, was completed for 387 barrels of oil and 165 barrels of water from Arbuckle lime at 3205 to 3230 feet. The test was drilled to 3234 feet and plugged back four feet in an attempt to shut off water.

On May 26, 1934, Continental Oil Company et al's Graber 1, NE NE NW 32-21s-1w, in the Mound Ridge area of southeastern McPherson County, was completed for 870 barrels natural and 1294 barrels after acid treatment in Hunton lime at 3274 to 3298 feet. It was the discovery well of the Graber pool, an accumulation which subsequently has been proven over a wide area. Present indica-

tions are that the Geneseo area will be of even greater extent. An average well in either of the areas costs approximately $35,000 which indicates that more than $7,000,000 will be spent on the development campaign in the Geneseo area and more than $3,500,000 in the Mound Ridge area.

KANSAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BARTON COUNTY—		
Magnolia, Steckel 6, nw nw ne 1-20s-11w	1245	3286
Continental, Risse 6, ne se se 36-19s-11w	1986	3273
Hilligoss et al, Schmidt 1, ne ne ne 27-19s-11w	*	3490
Mid-Continent, Matzek 4, sw sw se 25-19s-11w	1460	3298
COWLEY COUNTY—		
Earl Wakefild, Wilson 1, nw nw nw 4-32s-3e	*	3403
E. K. Carey, Davis 1, nw nw ne 2-31s-4e	153	2982
Palmer Oil, David 1, ne se sw 35-30s-4e	230	2969
ELLIS COUNTY—		
Margay Oil, Bemis "B" 1, sw sw sw 15-11s-17w	1353	3382
GREENWOD COUNTY—		
Ward McGinnis, Barb 1, ne ne sw 18-24s-12e	*	1843
HARVEY COUNTY—		
Empire O&R & Ryan Drlg., Webster 1, se se sw 8-24s-2w	*	3425
MARION COUNTY—		
Phillips Pet, Townsend 43, se se se 5-22s-4w	135	2478
RENO COUNTY—		
Shell, Nunemaker 1, cnl s½ s½ nw 11-26s-9w	11,740	4146
Shell, Seedle 1, cse nw 16-24s-4w	1433	3388
Welch 1, cse sw 9-24s-4w	890	3410
RICE COUNTY—		
Continental & Empire, Nickel 1, ne sw sw 13-18s-8w	1428	3216
Carpenter & Wilhelm, Rainey "B" 6, ce¼ sw sw 3-21s-6w (pb 3404)	*	3722
Tatlock, Berscheidt 4, nw sw nw 6-20s-10w	1917	3279
Continental, Foote 3, ne nw se 7-20s-9w	301	3298
Skelly, Sharpe 1, nw nw nw 8-20s-9w	984	3272
Vernon Oil & Cusco Ref, Boldt 1, nw sw nw 10-19s-10w (otd 3388)	*	3398
Aylward et al, Oberle 1, se se sw 19-18s-10w	*	3462
Continental et al, Ainsworth 1, sw sw se 24-18s-8w	1395	3180
ROOKS COUNTY—		
Pryor & Lockhart, Bradley 1, sw sw ne 31-10s-16w	*	3701
RUSH COUNTY—		
Torry-Feaster et al, Winget 1, se se se 15-16s-16w	lcn.	abd.
TUSSELL COUNTY—		
Gulf Oil, Hall 1, sw nw se 36-14s-15w (pb 3009)	382	3325
Lario & Texas, Boxberger 3, ce¼ nw nw 24-14s-15w	906	3230
Empire, Johnson 4, ne se ne 2-14s-15w	1172	3309
Gulf Oil, Ehrlich 3, nw sw nw 1-14s-15w	642	3095
Stanolind, Rein 1, nw nw nw 25-14s-14w	585	3008
Phillips & Gilmac Oil, Down 1, ne se nw 30-13s-14w	*	3320
SEDGWICK COUNTY—		
Shell, Lygrisse "A" 1, se se ne 15-26s-2e (pb 3304)	114	3308
STAFFORD COUNTY—		
Kessler & Their, Evens 1, ne ne ne 30-21s-11w	*	3677
Farris et al, Snyder 1, se se nw 3-21s-11w	390	3111
STEVENS COUNTY—		
Stevens County O&G, Kelley 1, cnw 15-34s-38w	*	2710
SUMNER COUNTY—		
Shell, Scroggins 3-A, cel se nw 14-32s-2e (otd 2076)	740	2884
Stelbar Oil, Erker 4, se se nw 33-31s-1w	1200	3688

*Failures; †Junked; ¶Million cu. ft. gas.

Third Talco Well

HUMBLE TEST WILL EXTEND FIELD NEARLY A MILE

WEEKLY STAFF REPORT

Tyler.—Early completion of a third oil producer for the Talco faulted area, northeast Texas, became assured late last week when Humble Oil & Refining Company's Myra Galt 1, NWc of 80-acre lease, R. I. Winn Survey, Titus County, recovered oil saturated sand in the Paluxy section of the Trinity series at a normal structural position. Upon completion, this well will extend production about 4300 feet to the southeast of the discovery producer. The area now has five active tests that are considered favorably situated for developing production from the Paluxy, with permits approved for more than 30 additional tests.

An accurate check on the thickness of the Paluxy pay zone and the depth of the water table will be determined by Humble Oil & Refining Company's Galt 1, according to reports. This outpost was coring at 4215 feet, or 3869 feet below sea level, late last week after passing up saturated sand in the upper section of the Paluxy. According to driller's log, the Georgetown lime was 725 feet thick, with base called at 4169 feet, or 3823 feet sub sea. Base of the lime in the discovery well was placed at 3820 feet below sea level. No casing has been landed in Galt 1, except for the surface pipe.

Humble Oil & Refining Company's Mary B. Groves 2, east outpost location for Titus County section of the Talco area and 1440 feet south of a test recently shut down for orders at 4492 feet, or 4183 feet sub sea, was drilling near the Woodbine sand horizon late last week. In the Talco townsite, B. C. Morrison, Dallas, et al's Sanders 1, center lot 6, block 30, has erected derrick.

Drilling operations were due to get underway late last week on Lucey Petroleum Company et al's A. W. Crawford 1, located 150 feet from west and center of north and south lines of 25-acre portion of 50-acre lease, Orlander James Survey, Franklin County. It is about 1700 feet north by west of production. The company owns one-eighth interest, while a like amount is owned by Ralph E. Fair. Harold Bird et al control 50 percent interest, and C. & G. Oil Company has the remaining one-quarter interest.

Production restrictions on the two completed wells, which have heretofore been held to 150 barrels daily each since completion, were lifted effective April 17 for 30 days by order of the Railroad Commission. The oil is to be consumed by drilling wells. Humble Oil & Refining Company's Hughes-King 1, Franklin County, averages 500 barrels of pipe line oil daily, flowing through one-inch choke on tubing. Pleasant Oil, Inc.'s C. M. Carr 1, the discovery well, pumped 520 barrels on April 14, but later encountered mechanical difficulties.

Magnolia Petroleum Company's C. M. Carr 1, a west offset to the discovery well, was drilling below 1000 feet last week, having cemented 12½-inch surface pipe at 244 feet. Jule Alford, Trustee, et al's J. E. Fry 1, located 9000 feet south of production in Titus County, has been abandoned near the 4300-foot level, having failed to show oil or gas production in the Paluxy zone.

Drilling has been resumed on Pure Oil Company's W. H. Faulkner 1, Wm. Elliott Survey, projected Trinity sand test for the Mount Enterprise faulted structure in eastern Rusk County, after cementing 9⅝-inch casing in lime at 3465 feet. This wildcat logged top of Georgetown lime at 3446 feet, with an elevation of 563 feet. It cut through the fault plane to the upthrow side in the Pecan chalk horizon.

Installation of a heavy-duty rotary formerly in service on the Gulf Coast is now underway at Gulf Oil Corporation's Mary J. Ross 1, located on 54.7-acrea lease, Robert Erwin Survey, about one mile south of production in the Camp Hill pool, Anderson County, in order to deepen from lime at 5476 feet to try for production in the Trinity sand series. It was abandoned last April after failing to encounter production from the Sub-Clarksville, or Woodbine sands, which yield high gravity oil in the field proper. Top of Georgetown lime was logged at 5452 feet, or 4965 feet below sea level. About 1100 feet of additional hole must be negotiated to reach the Paluxy, or Upper Trinity, which produces at Talco, and approximately 2600 feet of drilling will be required to penetrate the Lower Glen Rose, which yields gas and distillate at Cayuga, unless a marked thinning occurs in the top portion of the Lower Cretaceous.

The Kosse district, situated on the south end of the Mexia fault plane, gained a new test the past week through the spudding of J. Edward Mills, Fort Worth, et al's Sam Grucholski 1, northeast part of 40-acre lease, Dennis Herald League, Falls County. Location is about five miles southwest of Kosse and near the center of a 7500-acre lease block. Operators are seeking production from the Sub-Clarksville or Woodbine sands, and if

unsuccessful may continue to the Edwards lime.

Week end reports on C. F. Lytle et al's Thompson 1-T, which is seeking production from the lower Trinity on the west edge of the Mexia field, appeared discouraging for production as operations were under way below 5950 feet, or several hundred feet beyond the expected oil horizon. Casing may be set through the lower Glen Rose zone, which logged showings of oil and gas, then plugged back and perforated the pipe to test by stages. This method was successful in completion of the Trinity sand discovery well at Cayuga field.

Humble Oil & Refining Company is starting operations on a wildcat block in west central Cherokee County and about 1½ miles northeast of Ironton. Location is near the northwest corner of the S. D. Goodson tract, I. Reynolds Survey, and immediately north of the railroad.

In southeastern Lamar County, J. A. Forester et al's J. F. Woodward 1, about 1½ miles east by south of Minter, has fulfilled contract depth and suspended drilling at 4510 feet after failing to develop production from the lower section of the Trinity. Trace of gas was logged in Paluxy at 3060-3144 feet.

Interests from Providence, R. I., including Barrett, Saloman and Brooks, have made location for a wildcat to be drilled in this county on the Haynes & McCuistion 25-acre lease, A. W. Wright Survey.

Again Normal

COMPLETION DROP ONLY REFLECTS PERMIT DELAY

Tyler, Texas.—Temporary slump in drilling activity experienced by the East Texas field during the fore part of April resulted in total completions for the past week amounting to only 50, as compared to 62 the week previous. The lull in field work arose through the Texas Railroad Commission having deferred action on a great number of permit applications involving exceptions to the well spacing rules. East Texas operators drill and complete wells in less than 15 days, and a delay in clearing permits generally reflects on completion reports within the following two weeks. Field work now is back to normal, with about 130 rigs in service, and completions will shortly be averaging from 7 to 9 daily.

Completions the past week included two abandoned tests in Upshur County. Ben G. Barnett et al's W. W. Gibbard 1, SEc 194½-acre lease, R. Chamberlin Survey, encountered a sharp dip in the structure in logging top of sand at 3765 feet, or 3354 feet sub-sea, and the test was abandoned at 3812 feet. M. M. Johnston et al's C. F. Williams 2, SWc 44-acre lease, J. M. Tallent Survey, located a short distance southeast of the above failure, logged top of oil sand at 3700 feet, or 3310 feet sub-sea. Sand was cored to 3717 feet, and the well flowed at rate of 20 barrels per hour through open tubing. Jones & Shelburne's C. M. Victory 5, located on west line of 35.6-acre lease, E. A. J. Evans Survey, Upshur County, was abandoned at 1500 feet because of the partnership's Victory 4, located to the south, having registered a low structural position and required pumping equipment upon completion.

Seven of the completions listed on the current weekly report were credited with having penetrated one foot, or less, of the oil horizon in order to avoid premature appearnce of bottom hole water. These wells are situated on the west edge of the field, and will make their marginal-well quota of 20 barrels daily over sufficient period to amortize the cost, according to operators, provided the field's allowable is not raised any appreciable extent.

Magnolia Petroleum Company's R. H. Still 1, NWc of 45-acre lease, Mary Van Winkle Survey, east Kilgore area, was officially listed as a failure with the hole bottomed in Georgetown lime at 3598-3608 feet early in April, but has since been converted into a small producer, pumping 12½ barrels of oil in 3 hours. Plugging operations were under way when orders were issued to give the broken sand zone above the lime a nitro shot.

875 WELLS?

Humble said planning East Texas campaign

Tyler.—Humble Oil & Refining Company, largest acreage owner and producer in the East Texas field, will enlarge its drilling program and develop its properties to an average density of one well to five acres, according to reports current this week. Such a program would involve the drilling of possibly 875 wells, as the company now has approximately 2025 completed wells on 14,500 acres, or an average of about one well to seven acres.

Based upon an estimate of 130,000 productive acres, the field now has an average density of one well to 6.38 acres, with 20,350 completed wells. Most majors have been inclined to sidestep for several years what they term the drilling of unnecessary wells, but even with their reluctance to drill the field may eventually have one well to five acres, or less. Should the leading property owner adopt a fixed program on density other majors will likely do likewise. Companies that hold to the theory that continued drilling will result in serious economic difficulties for the field have attempted to block the crowding of additional wells on offset leases by resorting to court injunctions. This procedure has been only partially successful

EAST TEXAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
JOINER AREA—		
Atlantic, Pinkston 14-D (108-ac)	2000	3640
Davis & Hart (Acme Oil Co.), McDavid 1 (20-ac)	25	3607
W. M. Day et al, Arterberry-Jackson 1 (1-ac)	3600	3784
Marko O&G Co., T. Lacy-Pure 4 (50-ac)	2500	3656
Perry, Rec. (Stewart-Egan), Pace-Bateman 4 (25.29-ac)	3000	3770
Pet. Mar. Corp., Graham-Marathon 4 (37.21-ac)	1500	3664
Sinclair Prairie, Mayfield 20-B (149.67-ac)	8000	3621
Sun, E. O. Henson 6 (54-ac)	6000	3638
KILGORE AREA—		
Arkansas F. O. Co., Hughey-Ross 36 (220-ac)	7000	3548
J. G. Baird et al, Elder 12 (27.16-ac)	160	3492
B. G. Byars & Frank King, Florey 2 (20-ac)	3000	3638
Cook Drlg. Co., S. E. Mayfield 3 (33½-ac)	50	3664
Ralph E. Fair, Inc., D. Gill 5 (33-ac)	5500	3740
Humble, Crim 171 (914.51-ac)	6500	3592
Laird 78-B (568.53-ac)	480	3589
Sexton 11-C, (84.5-ac)	12,000	3776
Killam & Solley, Allen 1 (6.66-ac)	140	3669
Rajo Oil Corp., McComic-Shell 8 (109.52-ac)	750	3695
Rushwold Oil Co., Crews-Conoco 4-B (160-ac)	1000	3647
P. F. Rutledge et al, Carr 1 (8.04-ac)	8200	3463
Shell, Elder 31 (196.05-ac)	8000	3562
Elder 32 (196.05-ac)	8500	3561
Sinclair Prairie, Andrews 24 (200-ac)	6000	3470
King 56-A (366.7-ac)	9600	3560
O. B. Stephens et al, Warren 2 (16.8-ac)	4500	3715
Tide Water, Bean 17-A (128.44-ac)	5400	3689
Weaver-Crim Corp., Laird 14 (82-ac)	7600	3598
LONGVIEW AREA—		
J. Adkinson et al, Skipper 1-B (9.7-ac)	5000	3572
Alger Oil Co. (was E. & D. Oil Co.) Wells 10 (51.4-ac)	750	3692
Arkansas F. O. Co., Calvin 13 (65.22-ac)	9000	3560
Atlantic, Harris 15 (91.54-ac)	8000	3550
Pritchard 18 (100½-ac)	10,500	3703
B. G. Barnett et al, Gibbard 1 (194½-ac)	*	3812
Conservative Oil Co., Mackey 10 (147.1-ac)	500	3691
Bert Fields et al, Walker 9 (140-ac)	2000	3653
Gulf, Ray 5 (813¼-ac)	500	3588
Humble, Armstrong 25 (155.7-ac)	9600	3588
Armstrong 26 (155.7-ac)	7000	3589
M. M. Johnston et al, Williams 2 (44-ac)	500	3717
Jones & Shelburne, Victory 5 (35.6-ac)	*	1500
Nivla Oil Corp., Morgan 2 (34-ac)	300	3711
Southland Drlg. Co.-United E&W Oil Co., O'Byrne 21 (304-ac)	7400	3697
Stanolind, Adrian-McCrary 7 (65-ac)	7000	3557
Adrian-McCrary 10 (65-ac)	6800	3507
Fannie Smith 10 (69.83-ac)	4000	3543
S. G. & M. Smith 10-B (80.56-ac)	7500	3516
Stanolind-Falcon Co., F. Williams 8-B (71-ac)	4200	3661
Sun, E. O'Byrne 9 (310-ac)	1750	3729
Texas Co., G. W. Clark 7 (60-ac)	6400	3642
Tide Water, E. M. Nettleton 7-B (48-ac)	7500	3536
ANDERSON COUNTY (Cayuga Field)—		
Tide Water-Seaboard, Sullenberger 4 (363.6-ac)	3000	4047
Cortex Oil Co., H. W. Barton 1 (20-ac)	2400	4059
NAVARRO COUNTY (Corsicana-Powell Field)—		
Coffield & Guthrie, Inc., L. Lovett 1 (71-ac)	25	1207
W. L. Thompson & Sitton, S. D. Ramsey 1	*	1322
VAN ZANDT COUNTY (Van Field)—		
Pure, York 13 (109-ac)	8000	2937
Texas Co., Tunnell 11 (100-ac)	600	2947
White 3 (25-ac)	11,000	2938
TITUS COUNTY—		
John T. O'Neal & C. M. Joiner, O. C. Lilienstern 1	*	4487

*Failures; †Junked; ¶Million cu. ft. gas.

Good Extensions

IMPORTANT ENLARGEMENTS TO SEVERAL PROVED FIELDS

WEEKLY STAFF REPORT

Midland.—Important production extensions given established fields in Andrews, Ector and Winkler counties and the addition of another prolific oil producer in the Waddell field, Crane County, will have a stimulating influence upon development of the Permian Basin section of West Texas. Field work has recorded a sharp gain each month during the current year, and nearly all the rotary rigs available in the district are now in service.

Gulf Oil Corporation's W. N. Waddell 13, NWc Section 11, offsetting production in the Waddell field, set the pace on initial yield the past week in responding to acid treatment in lime at 3515-3545 feet with a potential rating of 10,513 barrels of 34 gravity oil. The dolomite lime formation was shot with 100 quarts of nitro prior to being treated with 5000 gallons of acid solution. The well flowed 424 barrels the first hour and 454 barrels the second hour after using acid. Rotary rig has been moved one location east to drill Waddell 14, a south offset to Magnolia Petroleum Company's Edwards 5, which has cemented 7-inch casing at 3227 feet. Tide Water Oil Company is the third entrant into the area, having started rigging up to drill W. P. Edwards 1, SWc NW¼ Section 2, Block B-23, PSL Survey, situated north of production.

Widen North Cowden

Productive limits of the North Cowden field were widened more than one mile northwest the past week when Devonian Oil Company's B. H. Blakeney 1, SEc N½ Section 22, Block 43, T&P Ry. Survey, T-1-N, tested five barrels oil per hour natural with gas flow rated at 2,000,000 feet daily from lime at 4194-4204 feet. Substantial gain in production is anticipated when the lime is penetrated further and shot with nitro. Salt series was logged at 1615-2670 feet, and top of gray lime at 3900 feet, or 801 feet above sea level. In the Foster pool, Ector County, Barnsdall Oil Company's H. C. Foster 2, C SW SW Section 18, Block 42, T-2-S, an east offset to the same company's discovery well, pumped 250 barrels initial after shot. The hole was plugged back from 4237 feet to 4225 feet, or 1289 feet sub-sea, after encountering sulphur water. Stanolind Oil & Gas Company's Witcher 1, south offset to the discovery well, flowed 650 barrels initial after shot in lime. It was plugged back from water at 4230 feet to 4211 feet, or 1274 feet below sea level. Stanolind Oil & Gas Company's E. F. Cowden 1-B, NEc Section 14 and about 6000 feet northwest of the three producers, entered the lime at about 3905 feet, with an elevation of 2970 feet, and has cemented 6⅝-inch pipe at 3920 feet.

In Winkler County, Illinois Oil Company, Dallas, extended the sandy-lime belt paralleling the east flank of the Hendrick field one mile to the west with flowing production. This company's Central State Bank (Abilene) 1, SEc SW¼ Section 23, Block 26, began showing free oil near the 2900-foot level, and was flowing two barrels hourly with gas production estimated at 4,500,000 cubic feet daily while drilling at 2972 feet. It is using pressure control equipment and circulating with oil. A new heavy duty rotary rig was purchased by the company for use in connection with its projected development program for Winkler County, and J. T. McCulloch, East Texas superintendent, has been temporarily assigned to the area. The company plans to deepen the above test to the 3100-foot level, then shoot the entire sandy-lime section.

Bert Fields et al's Roy Clapp-Pure 1, situated midway between Illinois Oil Company's well and production to the east, has cemented 8⅝-inch pipe in the lime horizon at 2427 feet. Humble Oil & Refining Company's N. R. Colby 1, NEc W½ Section 25, responded to nitro shot in sandy-lime at 2980 feet with a flow of 70 barrels hourly on preliminary gauge. Sinclair Prairie Oil Company's J. B. Walton 1-B, SWc E½ Section 24, flowed 639 barrels initial via casing after 130-quart shot at 2750-2880 feet. The latter logged top of lime at 2350 feet, with an elevation of 2871 feet. These two wells offset a recent semi-wildcat producer drilled by Bert Fields, Wilson Keys, A. W. Cherry et al on 160-acre lease farmed out by Continental Oil Company.

Humble Oil & Refining Company and Tide Water Oil Company's J. B. Walton 2-C, SWc NE SW Section 34, Block 74, PSL Survey, situated on a projected north trend from the Hendrick field, has started up to drill to the dolomite lime horizon. Wahlenmaier et al's Walton 1-A, located on an 80-acre lease farmed out by the partnership from Section 34, is making gas at 2883 feet, and has not been successful in drilling by junk. Top of brown lime was logged at 2640 feet, or 234 feet above sea level.

The Means field, Andrews County, was extended 1½ miles to the northwest when Humble Oil & Refining Company's J. M. Spinks 1, C SW SE Section 13, Block A-20, PSL Survey, gauged 197 barrels oil during first 24-hour open-casing test after 420-quart nitro shot in lime at 4400-4530 feet. The hole is bottomed at 4550 feet, or 1378 feet below sea level.

Grisham-Hunter Corporation, Abilene, et al have made locations for two wildcats to be drilled about six miles apart on opposite sides of the Ector-Andrews

TEXAS PANHANDLE
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CARSON COUNTY—		
Huber Pet. Co., S. B. Burnett 1-0	¶79.4	2365
GRAY COUNTY—		
Gulf Oil Corp., E. G. Barrett 2	889	3302
Magnolia, Elbert Barrett 1	105	3245
HUTCHINSON COUNTY—		
Gulf Oil Corp.-Panhandle, Whittenburg 5-D	258	3054
Stanolind, H. C. Pitcher 5-B	482	3150
Harry Stekoll et al, J. A. Whittenburg 3-H	406	2960
The Texas Co., T. D. Lewis 10	780	3006
Turman Oil Co.-Plains Pet. Corp., Whittenburg 1-B	305	2836
MOORE COUNTY—		
Magnolia, C. A. Herndon 1	¶12.5	3085
Phillips Pet. Co., Jones-Moore (66) 1	¶176.3	3270
WHEELER COUNTY—		
Royal O&G Corp., Keller 30	1234	2558
The Texas Co., Keller 16	709	2525

*Failures; †Junked; ¶Million cu. ft. gas.

WEST TEXAS
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CRANE COUNTY (Waddell Field)—		
Gulf Oil Corp., W. N. Waddell 13	10,513	3545
CROCKETT COUNTY—		
B. C. Mann, Dieringer & Wahlenmeir, J. W. Robbins 1	*	2165
ECTOR COUNTY (North Cowden Field)—		
Alma Oil Co., TP Land Trust 1	272	4208
ECTOR COUNTY (Judkins Field)—		
Amerada, W. E. Connell 2	213	3600
Geo. E. Farley et al, Connell-Conoco 2-B	280	3715
GLASSCOCK COUNTY—		
Conoco-Group 1 Oil Corp., Settles 4-S	492	1232
World Oil Co., McDowell 4-C	1536	2430
HOWARD COUNTY—		
Conoco-Group 1 Oil Corp., Eason 7	1163	2424
JONES COUNTY—		
Bridwell Oil Co.-Leland Fikes Jennings 1-B	123	1950
Geo. Callihan, Oyster & Rhodes, G. H. Higgs 2	*	3390
Tom B. Medders et al, P. M. Neas 1	*	2007
Ungren & Frazier, H. Dorsey 4-C	700	2068
J. W. Jennings 3	214	1947
PECOS COUNTY (Masterson Pool)—		
ABC Oil Co. (was Arthur Adams), J. Masterson 3	153	1453
PECOS COUNTY (Torborg Pool)—		
Cardinal Oil Co., M. A. Smith 6-A	23	516
Stanolind, Tippett 16-B	24	458
PECOS COUNTY (Yates Field) —		
Marathon, I. G. Yates 10-G (446.9-ac)	5472	1331
UPTON COUNTY (Wildcat)—		
Greencliff Oil Corp.-Shell, J. H. Tippett 1	*	4373
WARD COUNTY—		
Arnold Oil Co. (was Kirk-Anderson) E. R. Allen 2	71	2225
California Co., B. D. Durgin 35	504	2554
Ann Gordon 20	402	2526
Ann Gordon 23	1207	2550
Ann Gordon 24	2416	2524
FHE Oil Co., J. W. Maxwell 1	264	2526
Sid Richardson Oils, Inc., Johnston-Sun 30-B	1390	2578
WINKLER COUNTY (Gulf-O'Brien Field)—		
Gulf Oil Corp., G. W. O'Brien 68	66	3225
WINKLER COUNTY (Keystone Field)—		
Conoco, J. B. Walton 1	416	3410
WINKLER COUNTY (Sayre Field)—		
Gulf Oil Corp., Daugherty 1-A	25	3414
Humble, J. F. Howe 3	714	2982
Magnolia, J. B. Walton 18	835	2935
J. B. Walton 20	568	2930
Shell, Hendrick-Walton 3-J	553	3017
Sinclair Prairie, J. B. Walton 1-B	639	2880
WINKLER COUNTY (Scarborough Field)—		
Sid Richardson Oils, Inc., Scarborough 2-F	100	3048

*Failures; †Junked; ¶Million cu. ft. gas.

County line. In the extreme northwest corner of Ector County, R. B. Cowden 1, C NW SW Section 10, Block 45, T&P Ry. Survey, T-2-N, offers the best prospects

NORTH TEXAS
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ARCHER COUNTY—		
M. F. Brown et al, Campbell 1, blk 11	*	1116
L. T. Burns et al, T. A. Matthews 1-A, blk 137	*	1365
W. D. Pace 3, blk 163	15	1263
C. B. Christie et al, L. F. Wilson 2, sec 1	250	1608
Conoco, C. H. Zane Cetti 7	*	1852
Consolidated Oil Co.-Deep O.D. Co., Wilson 3, lot 2	1300	2236
Deep Oil Dev. Co.-Lindsay Drl. Co., Wilson 12, lse 4	1800	2229
Fain-McGaha Oil Corp., McCrory-Wilson 4-F, blk 21	160	1616
N. D. Goldsmith et al, L. F. Wilson 1, sec 1	60	1615
Kimbell & Bohner, J. D. Carpenter 6, sec 38	3	1088
J. D. Carpenter 7, sec 39	5	1063
Kittery Oil Co., J. T. Richardson 4	*	1171
Lickey & Guffey, J. R. Parkey 1, sec 1	*	1785
C. B. Long et al, Turbeville 7, sec 156	20	1510
Pet. Producers Co., Richardson 20-D, blk 1	10	1263
Richardson 21-D, blk 1	*	250
Richardson 16-E, blk 1	80	1266
Underwood Drl. Co., R. O. Andrews 1-A, sec 1805	*	936
White & Duncan, W. Owens 1, blk 26	*	714
BAYLOR COUNTY—		
Pet. Producers Co., Portwood 29, sec 1281	25	1398
CLAY COUNTY—		
Gerard Bros., Lone Star Gas Co. 1, sec 37	*	404
COOKE COUNTY—		
T. P. Frost et al, Rohmer 3, blk 16	25	840
Hudspeth et al, Truebenbach 5-B	40	951
F. W. Merrick, Inc., Knabe 27, blk 12	7	805
Chas. Newsom, T. Wiesman 1, blk 9	*	1803
Ruwaldt & Couch, H. Fleitman 1	*	1551
Schermerhorn O&G Co., F. J. Hess 4	10	881
Seitz-Comegys & Seitz, Inc., Trew 5-A	90	1085
The Texas Co., Mary Kessler 2, blk 4	18	890
COTTLE COUNTY—		
Alma Oil Co., T. B. Yarbrough 1	*	6002
JACK COUNTY—		
Brazos River Gas Co., S. A. York 6.	85	2945
R. D. Compton et al, Chas. Henderson 2, blk 2	15	343
John Korp et al, G. Lewis 2, blk 7	5	299
W. R. Stafford et al, L. S. Wright 1	*	876
MONTAGUE COUNTY—		
Bourland & Gannon, W. W. Jones-Conoco 6-A	6	1775
WICHITA COUNTY—		
C. B. Bailey et al, Munger 32, blk 30	*	924
Bourbon Royalty Co., J. A. Watkins 4, blk 46	*	850
Geo. W .Cooper et al, Waggoner Bros. 37, blk 13	*	1785
A. Kriss et al, C. W. Coffey 1	*	400
W. B. Omohundro et al, S. P. Gibson 3, blk 302	25	1853
Rathke Oil Co., Burnett 8	*	1825
J. A. Watkins 7, blk 46	10	670
H. L. Rugeley et al, Waggoner Est. 7, blk 148	150	1628
J. A. D. Smith et al, S. M. Daniel 1	*	600
Waggoner Ref. Co., Waggoner Est. 5-AA, blk 148	61	1584
WILBARGER COUNTY—		
Barkley & Meadows, Waggoner Est. 17-C, sec 5	30	1122
Deep Oil Dev. Co., Waggoner Est. 4, sec 40	24	1887
King Oil Co., Waggoner Est. 2-O, sec 36	*	2578
Summitt Oil Co., Waggoner Est. 2, sec 14	6	785
YOUNG COUNTY—		
L. T. Burns et al, Benson 1-A, sec 1397	*	1002
Chambers & Humphreys, Benson 1, sec 1392	188	895
N. D. Goldsmith et al, Ann Beardon 2, sec 2	*	1150
Falls Production Co., S. R. Jeffery 1	¶8-2500	3968
S. P. Gose et al, W. Hunt 1, sec 178	*	1102
B. N. Honea et al, fee 13, sec 1492	11	935
D. L. Wolf et al, J. R. Dyer 1	*	643

*Failures; †Junked; ¶Million cu. ft. gas.

of the two tests, as it is about 1½ miles northwest of a gasser that yields a small spray of oil from lime at 4509 feet, or 1215 feet below sea level. The Andrews County wildcat will be on the Ratliff-Bedford tract, C NW¼ Section 24, Block 73, PSL Survey.

Honolulu Oil Corporation and Cascade Petroleum Company's L. P. Bennett 1, Yoakum County's only producer, is reported to have flowed an average of 15 barrels per hour on four-hour gauge through three-quarters of one-inch choke on tubing after conditioning the hole. This wildcat was plugged back from 5278 to 5265 feet, then shot with nitro early in April.

Increased volume of sulphur has appeared in Fleetborn Oil Corporation and Mid-Continent Petroleum Corporation's F. C. Dodson 1, Glasscock County wildcat, when the hole was deepened beyond the 3100-foot level. First water was picked up at 2795 feet, with an elevation of 2714 feet. Based on oil and gas showings logged above and below the first lime marker at 2332 feet, an active lease buying program was waged in the area early in April.

YOUNG INTERESTING
Big Rathke well and new field for the county

Wichita Falls.—Southern Young County's lime horizon recorded an unusually large flowing producer in the Rathke field, and added a new oil area the past week through exploration work carried on by independents. Falls Production Company's S. R. Jeffery 1, southwest portion of the J. C. Holley Survey, A-1602, provided a minor extension for the Rathke area in flowing 110 barrels per hour average on nine-hour gauge from lime at 3965-3968 feet. The gas volume was estimated at 9,000,000 cubic feet daily.

Nash & Windfohr Oil Corporation opened a new high gravity oil producing area for the county when its W. S. Sims-Conoco 1, situated in west portion of the D. Franklin Survey, A-1425, about four miles southwest of Graham, indicated a natural yield of about 150 barrels daily from lime at 3718-3764 feet. Production test has been deferred pending the setting of a string of 7-inch casing on the saturated lime horizon. Ray & Staniforth's Wooten-King 1, SEc Section 1976, TE&L Company Survey, which was reported last week as having effected a northwest extension for the Knox field, west central Young County, gauged 300 barrels of oil in three hours, then shut in for lack of storage. Saturated lime at 3940-3962 feet was treated with 3000 gallons of acid solution.

Cooke County experienced an active lease play the past week following the successful completion of Anderson-Kerr Petroleum Company's F. A. Bruhlmeyer 1, H. Strong Survey, A-930, about four miles east of Gainesville, from sand section of the Pennsylvanian at 2009-2014 feet with an initial flow of 10 barrels of 42.7° gravity oil per hour. The discovery company, which maintains headquarters at Oklahoma City, is credited with having paid cash bonuses ranging up to $175 per acre for additional acreage near the well. most of the trading was by Oklahoma interests.

Sunray Oil Company et al's A. C. McCall 1-A, W. H. White Survey, A-1134, which is seeking production from the Ordovician lime horizon in northern Cooke County, was drilling in hard lime near the 4500-foot level late last week. Sinclair Prairie Oil Company is reported to have acquired one-half interest in the test and the 6500-acre lease block, and contract has been made to drill to 5000 feet.

In Grayson County, Olson Drilling Company's Southwestern Life 1, deep test for the Preston anticline, was log ging black shale while drilling near 5750 feet, according to late reports.

The Texas Company's J. H. Turveville 1-I, Archer County wildcat, has been abandoned at 2860 feet after failing to encounter production in the Canyon lime horizon. It is located in Section 169, J. W. Cain Survey, A-69.

Operations have been suspended at 6002 feet, with lease contract fulfilled, by Alma Oil Company's T. B. Yarbrough 1, northeastern Cottle County wildcat. It is located about seven miles west by south of the same company's Mollie Low 1, southeastern Childress County wildcat that showed oil in Canyon lime early last year, but was later deepened to 8223 feet and abandoned. Several lease buyers have been active lately in western Hardeman County and due east of the Childress County deep test in assembling a drilling block, and if successful in obtaining the desired amount of acreage will start drilling on a 6000-foot test within four months, according to reports.

Revival of development work in the Portwood area, southeastern Baylor County, is expected to follow completion of Consolidated Oil Company's W. H. Portwood 1-Z, SW¼ Section 1573, TE&L Company Survey, which flowed 400 barrels initial from sand at 1361-1363 feet. It is a semi-wildcat and may link a small pool with the main Portwood area.

SEMI-WILDCAT WELL
Hutchinson County test is flowing by heads

Pampa.—Semi-wildcat territory in west central Hutchinson County contributed an oil producer the past week when Skelly Oil Company and Godfrey L. Cabot Company, Inc.'s W. E. Herring 1, E. Almaguie Survey, flowed by heads from lime at 3125-3133 feet. No estimate has been placed on the capacity of the well, as operations were temporarily halted to install tankage. It is located about one-half mile east of The Texas Company's W. E. Herring 1, completed in September, 1934, flowing 58 barrels of oil and 10,400,000 cubic feet of sulphur gas daily after treating lime pay at 3139-3177 feet with acid. The latter drilled into salt water at 3248-3264 feet, and plugged back to 3177 feet. It is located about eight miles from nearest pipe line connection. Market outlet for the area is likely to follow the completion of the second producer.

Chicken Creek Oil Company's Ledrick 1, Section 55, Block C, G. & M. Survey, central Roberts County wildcat, was drilling near the 6500-foot level, according to late reports. This wildcat has been under way since May, 1931, except for periodical shut-downs for repairs and equipment, and has used eight different sizes of casing.

Field Extended

SAND BODY SUGGESTS LARGE TOM O'CONNOR YIELD

WEEKLY STAFF REPORT

Corpus Christi.—Varied results in key wildcats held interest in the Corpus Christi sector of the Gulf Coast as the week closed; several new strikes appear possible, while a couple of the highly important tests are not showing up too well. The most important happening, however, seems to be the extension of the Tomoconnor field of Refugio County, where a heavy sand body suggests tremendous recovery.

Quintana Petroleum Corporation's Fannie Heard 1, block 59, T. Webb Survey, about 1½ miles north of Tomoconnor field and three miles east of Greta production in Refugio County, flowed at the rate of 75 barrels of oil per day through ⅜-inch choke from 10 perforations at 5850½-54 feet. It showed pressures of 840 pounds on tubing and 300 pounds on casing. This well found sand, reported by some to be a solid section, from 5836-5968 feet.

The field proper has heavy sand sections, but in most cases they are broken by sand and shale streaks. An illustration is the newest probable producer for the field, Tom O'Connor 34-A, which found oil sand at 5779-82 feet, sand and shale streaks to 5906 feet, below which solid sand was found to 5943 feet. The well was carried to 6495 feet and plugged back to 5945 feet, casing being set on the new bottom. This field has not recorded a single failure, the majority of wells coming in for large initial flows.

In San Patricio County, Benedum and Trees' E. H. Welder 2, Section 19, 3½ miles northeast of Sinton, perforated liner at 6108-16 feet and made considerable salt water on production test. It is being further tested. The well was deepened from 5710 feet where it showed for some sort of producer, and liner was set to the total depth. It may be a bad cement job. On the other hand, there is doubt as to whether or not the hole is bottomed at 5116 feet. It may be seven feet deeper, which may account for bottom hole water.

Late in the week interest centered around Texon Royalty Company and Lucey Petroleum Corporation's Coopwood & Rolsten 1, wildcat two miles southwest of the King Ranch field, but in Jim Wells County, which made a drill stem test with side wall packer after perforating at 5389-98 feet. It recovered 1000 feet of pipe line oil and showing 40 pounds pressure in 15 minutes. The oil is between 40 and 45 gravity. Liner and screen was set and efforts were being made to run tubing late April 24, but the well continued its attempt to blow out of control. The well has been drilled at 6015 feet, ran an electric formation tester and set casing at 5526 feet. It is nearly 3 miles south and half that distance west of La Jita Oil Corporation's King 1, drilled last year. This well showed the same production about six feet lower, structurally, but mechanical difficulties prevented successful completion. The field is producing gas from two sands at 3800 and 4000 feet, the new producer opening a third sand and materially extending production.

There are a number of other interesting wildcats in the county reaching critical depths, placing this area in the spotlight for the next several days.

Shell Petroleum Corporation apparently has the second 4900-foot Greta sand producer for the Taft field, being a west offset to the discovery. A drill stem test from 4885-4915 feet developed 1800 feet of oil and 10 pounds pressure in 15 minutes. Casing has been set at 4900 feet. Sand was found at 4903-12 feet. Just north of this well, Humble Oil & Refining Company's J. W. Godwin 1, washed and swabbed after finding sand at 3997-4005 feet in the sidetracked hole. It is not showing very well, but is expected to make at least a small producer, which will be the second shallow sand well for the field.

With pipe line facilities being further increased in the Corpus Christi group of fields in Nueces County, a much needed outlet for the rapidly increasing supply of crude is being provided. As a result, it is likely that the present heated development campaign will be continued for some time to come.

Saxet Heights, or Corpus Christi field, was extended east 1600 feet when R. Y. Walker's Clark and Reagan 1, Villareal Survey, flowed an estimated nine barrels per hour through ⅛-inch choke at 4061-65 feet. The pressures are 300 pounds on tubing and 450 pounds on casing. The week was the heaviest in the history of the field for new completions.

In Saxet field, several new wells have been started toward the new 5900-foot horizon and additional work is expected to commence immediately.

Santa Clara Oil Company's Cooke 1, wildcat between the Saxet and Clara Driscoll areas, has been drilled to the contract depth of 6000 feet, and this company plans to resume operations in the Clara Driscoll field, where only one producer has been drilled. O. W. Killam is drilling a wildcat just southwest of this field.

Agua Dulce field, also in Nueces County, was given an appreciable extension in the 4800-foot sand through the completion of a gasser spraying about 15 barrels of gasoline per day, the United Production Corporation in M. L. Rivers 2-A. The well is located 3800 feet south of Rivers 1-A, producer at the same level. It is in sand at 4670-4728 feet with casing set at 4690 feet.

Balcones Fault

SOME OF RESULTS ARE NOT TOO PROFITABLE

San Antonio.—Continuance of development in the Austin chalk along the Balcones fault zone is evident, although some of the most recent explorations have not been too profitable. Low initial production in both deep and shallow tests is offset by excellent flows in several wells.

The Guadalupe-Caldwell sector has been reentered with considerable work to the chalk at 2000 to 2500 feet, initial production in most cases being less than 150 barrels per well, despite the fact that acid treatment has been resorted to. A few of the recent completions, however, range up to 1000 barrels per day at these shallow levels.

Pearsall field, Frio County, recorded two excellent completions, but several other tests are showing as light producers. Amerada Petroleum Corporation's McWilliams Tract 3 flowed 1079 barrels per day through ¾-inch choke on an eight-hour gauge, the well being bottomed at 5575 feet. The same company plugged Smith 1 from its former producing level in the Buda lime at 5927 feet to about 5500 feet. Casing was perforated at 5360-5500 feet and the well flowed 1340 barrels of oil in 24 hours through various chokes ranging from ⅛-inch to ¾-inch. It flowed 25 barrels per hour on ¼-inch choke, but this figure was increased to 90 barrels per hour when the opening was increased to ¾-inch. E. O. Kothman 1, located 1½ miles east of the deep production, bridged over after showing an initial flow of 147 barrels per day through ¾-inch choke at 5506 feet. Other wells in the chalk on the active list are working over, and in most cases cable tools are being employed. It is the plan of the company to set casing atop the chalk in one of the new wells, then drill in with cable tools. This same practice is being employed in Halff and Oppenheimer 7, a 3900-foot Navarro sand test.

Continuing southwest along the strike in Zavalla County, Bay Oil Corporation is making hole near 3000 feet in National Bank of Commerce 1. Frank Buttram et al's Whitecotton 1 is drilling at 3725 feet. Leona Oil Corporation showed 40 feet of sand section at 4320-80 feet carrying considerable gas, and is going ahead.

Stanolind Oil & Gas Company is re-

ported making plans for exploratory work on properties along the Chittim Anticline in Maverick County, acquired some time ago. The block involved many thousand acres and includes the deep Rycade field.

In Medina County, W. C. Campbell et al's McMenemy 1, southeast of Devine, is rigging up to work over. It plugged back from 2892 feet to 2190 feet and is showing some oil from 1910 to 2190 feet. It tried to pump, but the tubing clogged.

A shallow Taylor marl field may be in the making as a result of the showing in H. F. Goff's Patschke 1, Foley Survey, two miles southeast of Thorndale, Williamson County. The well is in a sand section at 1130-55 feet and is starting to bail.

In Burleson County, Walter Blumenthal is working out some sort of a deal to drill another test near the recently abandoned Crain 1. The Crain test drilled to 6340 feet in the Edwards lime and on several tests showed both oil and water.

RIO GRANDE VALLEY

Deep tests are holding interest of operators

Mission.—Rio Grande Valley's deep tests, now at critical depths, are holding the prime interest in this district. Aside from this work, the deeper sand test in the Samfordyce field, Hidalgo County, has been completed as an oil producer.

J. T. Barlow et al's Cpaha 1, 3500 feet north of production in Samfordyce field, is making 48 barrels of oil per day with considerable gas through 1/16-inch tubing choke and is showing 1050 pounds tubing pressure. Casing pressure is 1220 pounds. It is bottomed at 2966 feet with the production coming from 2951½-55 and 2964-66 feet.

The field was given several minor extensions through completion of outpost wells in the regular sand at 2750 feet.

Gulf States Oil Company's Engelman 3, east offset to the discovery well of the Mestenas field, Hidalgo County, is drilling near 6000 feet. Four miles to the southeast, Quintana Petroleum Corporation's Engelman 1 is coring at 7885 feet.

Still farther east in Mercedes field, Union Sulphur Company is trying to complete American 7, east of the field. It is bottomed at 7608 feet with casing perforated between 7540 and 7549 feet. American 8 is coring below 7510 feet, while American 9 is drilling at 5366 feet.

In Brooks County, The California Company's Garcia 1, Alta Mesa district, is coring solidly, now being at 5645 feet.

MAGNOLIA OFFICE

To be established for Corpus Christi division

Corpus Christi. — Preliminary plans for the establishment of a division office for the Magnolia Petroleum Company in Corpus Christi soon, were announced last week while officials of the company and the Socony-Vacuum Corporation, Dallas and New York, were here in connection with a field inspection trip. The company has heavy holdings through this portion of the Gulf Coast as well as in the Duval County sector of the Mirando district, where it is carrying on a drilling campaign.

Among those in the inspection party were the following: D. A. Little, Dallas, president; J. J. McGrath, Corpus Christi, district land man, who was in charge of arranging the district tour; J. A. Brown, New York City, chairman of the management committee; Wilbur Burt, New York City, vice-president in charge of refinery; Brewster Jennings, New York City, vice-president; Robert Siegel, New York, vice-president; M. J. McLaughlin, Dallas, vice-president in charge of production; Fred M. Lege, Jr., vice-president in charge of marketing; C. L. Gladden, Dallas, vice-president; D. B. Carter, Dallas, petroleum engineer; W. Maddoz, Dallas, vice-president in charge of traffic, S. A. Thompson, Dallas, chief geologist; B. C. Renick, San Antonio, district geologist; C. A. Hill, Laredo, superintendent; Roy Tribby, Sinton, district superintendent; W. W. Hammond, Beeville, geologist; C. V. Curry, Corpus Christi, land man; Cecil Lanier, Laredo, scout; Henry Cortes, Houston, district geologist. L. S. Sinclair, Dallas, vice-president, was ill at Spohn Hospital and unable to attend.

PETTUS TREND

Abandonments feature wildcat development

Beeville.—Several important wildcats along the Pettus trend were abandoned as failures during the week. In addition, two wells blew out at shallow depths and ran wild, but finally were brought under control.

The California Company's W. A. Boothe 1, Walker Survey, one mile east of Mineral, Bee County, topped Pettus sand at 3936 feet and has been abandoned in the Yegua at 4152 feet. It showed salt water at both levels.

Magnolia Petroleum Company's W. A. Boothe 1, west side of the Ray area of the West Tuleta field, Bee County, drilled to 4320 feet in the Yegua and has been abandoned.

Marine Oil Corporation attempted to work over Webb Heard 1, 2000 feet southeast of the discovery well of the Beeville area, but finally gave it up as a failure. It attempted a series of perforations between 5850 feet and the total depth of 5936 feet, but the result was both salt water and gas, with some distillate showing. The rig is being moved to Wood 1, discovery well, which is to be reworked.

A slight southwest extension has been provided in the Caesar field by Sun Oil Company's Borroum 2, which has the sand at 3108-18 feet with casing set at 3112 feet. It was in final stages of completion at last reports.

In Mount Lucas field, Houston Oil Company's Cartwright 34 blew out at about 500 feet and ran wild, showing gas. This well is 500 feet east of Cartwright 33, which blew out some time ago and cratered, finally catching fire. The blowout probably is from a shallow sand charged with gas from that crater.

John Camp Drilling Company's Byrne Estate 3, west of Calliham in McMullen County, blew out at about 500 feet and was running wild at last reports. It is 25 feet east of Byrne 2, which blew out at 306 feet, but which finally was killed and cemented.

SOUTH TEXAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BASTROP COUNTY—		
Marts & Beavans, C. L. Riddle 5-A, Maxmillan sur (N. Dale)	50	2261
BEE COUNTY—		
The California Co., W. A. Boothe 1, 330 ft sl and el of 100-ac tr, A. Walker sur	*	4152
Magnolia, W. A. Boothe 1, Blanchard sur (W. Tuleta)	*	4320
Marine Oil Corp., Webb Hearn 1, 1650 ft se along road from nw corner of 1633-ac tr, thence ne 990 ft at right angles in E. Ryan sur (Beeville)	*	5935
Richardson et al, Mengers 1, W. R. Ryan tr, Wm. Allen sur	*	lcn.
Texas Co., S. E. Young 15, T. J. Butler sur (Dirks)	425	3929
BEXAR COUNTY—		
Trawalter & Umburn, Simon Wetz 4, S. Jett sur, (Von Ormy)	5	620
BURLESON COUNTY—		
Walter Blumenthal, Q. V. Crain 1, 330 ft swl and nwl of tr, W. C. Pearce sur	*	6340
CALDWELL COUNTY—		
W. W. Lincoln, W. Branyon 1, D. Cooper sur, (Branyon)	20	2065
Ogden & Reed, R. B. Vickery 4, S. Damon sur (Dale)	110	2109
F. G. Scott, E. P. Dunavent 1, 970 ft nel, 1450 ft nwl 311-ac tr, Wm. Pettus sur	*	245
DUVAL COUNTY—		
Atlantic, J. F. Welder 8-D, sec 113 (Seven Sisters)	375	2473
J. F. Welder 1-E, sec 381 (Seven Sisters)	*	2439
Bridwell Oil Co., Bishop 16, sec 76 (Loma Novia)	400	2660
Wm. Hubbard 4-C, sec 75 (Loma Novia)	207	2611
Wm. Hubbard 14-C, sec 75 (Loma Novia)	482	2562
Duval Oil Corp., Bishop 19, sec 59 (Loma Novia)	400	2546
Highland Oil Co., M. C. Hubbard 9, sec 72 (Loma Novia)	825	2737
Humble, A. H. Badgley 3, sec 307 (Seven Sisters)	288	2537
M. C. Hubbard 10-A, sec 84 (Loma Novia)	375	2858
M. C. Hubbard 50-B, sec 83 (Loma Novia)	1000	2801
M. C. Hubbard 37-B, sec 72 (Loma Novia)	250	2714
R. Serna, Jr. 10-A, sec 384 (Seven Sisters)	1000	2468
R. Serna, Jr. 14-B, sec 384 (Seven Sisters)	*	2250
T. D. Smith 8, sec 382 (Seven Sisters)	1350	2467
I. F. Welder 8-C, sec 554 (Loma Novia)	500	2718
Magnolia, Duval Ranch 2, sec 95 (Piedra Lumbre)	250	1962
C. W. Hahl 26, sec 67 (Loma Novia)	500	2645
Navarro Oil Co., J. F. Welder Heirs 1, sec 383 (Seven Sisters)	407	2461
Parr Oil Co., J. F. Welder 2, sec 383 (Seven Sisters)	625	2446
Reliance O&R Co., P. L. Telford 1-A, sec 386 (Seven Sisters)	1050	2216
J. F. Welder Heirs 3, sec 381 (Seven Sisters)	550	2411
J. F. Welder Heirs 4, sec 381 (Seven Sisters)	¶10	2421
Reynosa, Wm. Hubbard 1, sec 75 (Loma Novia)	192	2572
Santa Clara Oil Co., J. F. Welder Heirs 30, sec 383 (Seven Sisters)	1200	2472
J. F. Welder Heirs 3-B, sec 383 (Seven Sisters)	1000	2500
Shell, V. Mendoza 3, sec 68 (Loma Novia)	389	2772
V. Mendoza 4, sec 68 (Loma Novia)	480	2753
Standard of Kansas, W. K. Hoffman 1, sec 118 (Hoffman)	500	2877

Company, Well and Location	Init. Prod. Bbls.	Depth
Texas Co., Bishop 12, sec 59 (Loma Novia)	360	2555
H. Wendt 32, sec 68 (Loma Novia)	450	2750
H. Wendt 33, sec 68 (Loma Novia)	300	2688
FRIO COUNTY—		
Amerada Pet. Corp., T. G. McWilliams et al 1, tr 3, Arocha sur No. 299 (Pearsall)	1250	5575
W. H. Smith 1, J. B. Mason sur (Pearsall) wo-pb and perf csg 5360-5500	2500	6238
GUADALUPE COUNTY—		
R. C. Robbins, Manford 1, J. Hodges sur (Manford)	7	2581
HIDALGO COUNTY—		
J. T. Barlow et al, M. F. de Chapa 1, tr 252, por 39 (Samfordyce)	250	2966
Henshaw Bros. & Lee Davis, F. Farias et al 1, tr 255, por 39 (Samfordyce) ow dd from 2860, but pb and perf 2769-85	50	3024
NUECES COUNTY—		
R. B. Bryant, Clarkwood Common school Dist. 1, blk 14, Clarkwood townsite (Saxet)	875	4428
Circle Oil Co., Pete Whelan 3, (Saxet Heights)	725	4084
J. H. Coker & Lee Bros. Oil Co., A. J. Geistman 1, 660 ft wl, 330 ft nl of 60-ac lease, J. Ward sur, perf csg 3160-65	30	5000
Conroe Drlg. Co., J. Dunn 2, Villareal sur (Saxet Heights)	400	4064
McBride 2, Villareal sur (Saxet Heights)	¶20	4112
J. K. Culton, H. B. Baldwin 1, blk 20, Russell Farm lots (Saxet Heights) deepened from 4082	650	4091
Lonnie Glasscock, T. B. Thornton 1, El Rincon del Oso gr (Saxet Heights)	275	4088
Tom Graham & Republic, Whelan 1, Villareal sur (Saxet Heights) pb and sidetrack 3700, dr to 4060	350	5254
D. H. Hawn, Dr. C. W. Skipper 2, Villareal sur, (Saxet Heights)	550	4080
Houston Oil Co., Lawrence-Harrell 3, blk 19, H. B. Sheppard Farm lots (Saxet)	*	lcn.
R. Morgan et ux 10, sec 7, Range 5, Rincon del Oso gr (Saxet)	675	4864
Johnston & Skeen, L. Smith 1, blk 10, Bancroft Farm lots (Saxet Heights)	750	4070
Richardson et al, T. H. Isensee 2, blk 7, Clarkwood townsite, land sur (Saxet)	1100	4440
Southern Minerals, F. J. Smith 3, blk 3, Sheppard Farm lots (Saxet)	850	4864
W. F. Stone, Tr., E. F. Schleier et al 1, lot 4, Ellendale Gardens No. 2 (Saxet Heights)	450	4089
Taylor Refining Co., F. H. Kahler 1, Kinney sur (Saxet Heights)	575	4078
W. A. Saunders 2, Villareal sur (Saxet Heights)	450	4078
Texon Royalty Co., S. M. Vance 2, sec 402 (Saxet)	850	4424
United Prod. Co., M. L. Rivers 2-A, Chapman Partition (Agua Dulce)	¶40-15	4728
R. Y. Walker, G. C. Clark 1, Villareal sur (Saxet Heights)	450	4065
REFUGIO COUNTY—		
Quintana Pet. Corp., Fannie Heard 1, 475 ft sl, 2296 ft wl blk 59, T. Webb sur, 1½ mi n Tomoconnor	250	5968
SAN PATRICIO COUNTY—		
Plymouth Oil Co., E. H. Welder 41-C, sec 49, Welder sub (Plymouth)	450	5503
STARR COUNTY—		
Fech Oil Co., F. Doyno 7, sh 77-A, por 81 (Rio Grande City)	*	1471
F. Doyno 8, sh 77-A, por 81 (Rio Grande City)	30	1450
VICTORIA COUNTY—		
Barnsdall & American Liberty, L. M. Pickering et al 3, SA&MG Ry. sur, ab 306 (Placedo)	575	4771
Sun Oil Co., J. J. Marek 4, SA&MG Ry. sur, ab 382 (Placedo)	650	4776
WEBB COUNTY—		
Foster Barnsley, C. H. Webster 5, ne sw sec 684 (Carolina-Texas)	10	3047
Mills Bennett, L. Moglia 1, 692 ft e and 330 ft n of se cor sec 709, and in sec 723	*	2675
E. L. Valadez 5-A, sec 111, sh 9-C, (Lopez)	522	2202
E. L. Valadez 9-A, sh 9-C, sec 111 (Lopez)	500	2200
Cole Pet. Co., R. Benavides 95, blk 7, sec 7, Cole sub (Cole), pb and perf csg 2935-50	¶40	3428
Rosa Benavides 96, blk 2, sec 7, Cole sub, Cuellar gr (Cole)	*	3456
Luling O&G Co., Peal 1, se nw se sec 72 (Lopez) perf above 2090	¶20	2337
Magnolia, Seacord Benavides 10, blk 322, Hale sub, Arispe gr (Cole)	450	2830
S. Benavides 8-B, blk 358, Hale sub M. Arispe gr (Cole)	450	2838
G. G. Mortimer, M. L. Lopez 9, sec 112 (Lopez)	275	2245
P. L. Vela 3, sec 114, blk 1, sh 8-C	100	2206
H. M. Reed, S. Benavides 1, blk 319, Hale sub, Arispe gr (Cole)	1250	2862
ZAPATA COUNTY—		
Clover O&G Co., A. P. Haynes 11, blk 7, Haynes sub, Comitas gr (Comitas)	35	909
Texas Co., Whitehead 87, C. Blanco gr (Escobas)	25	1264

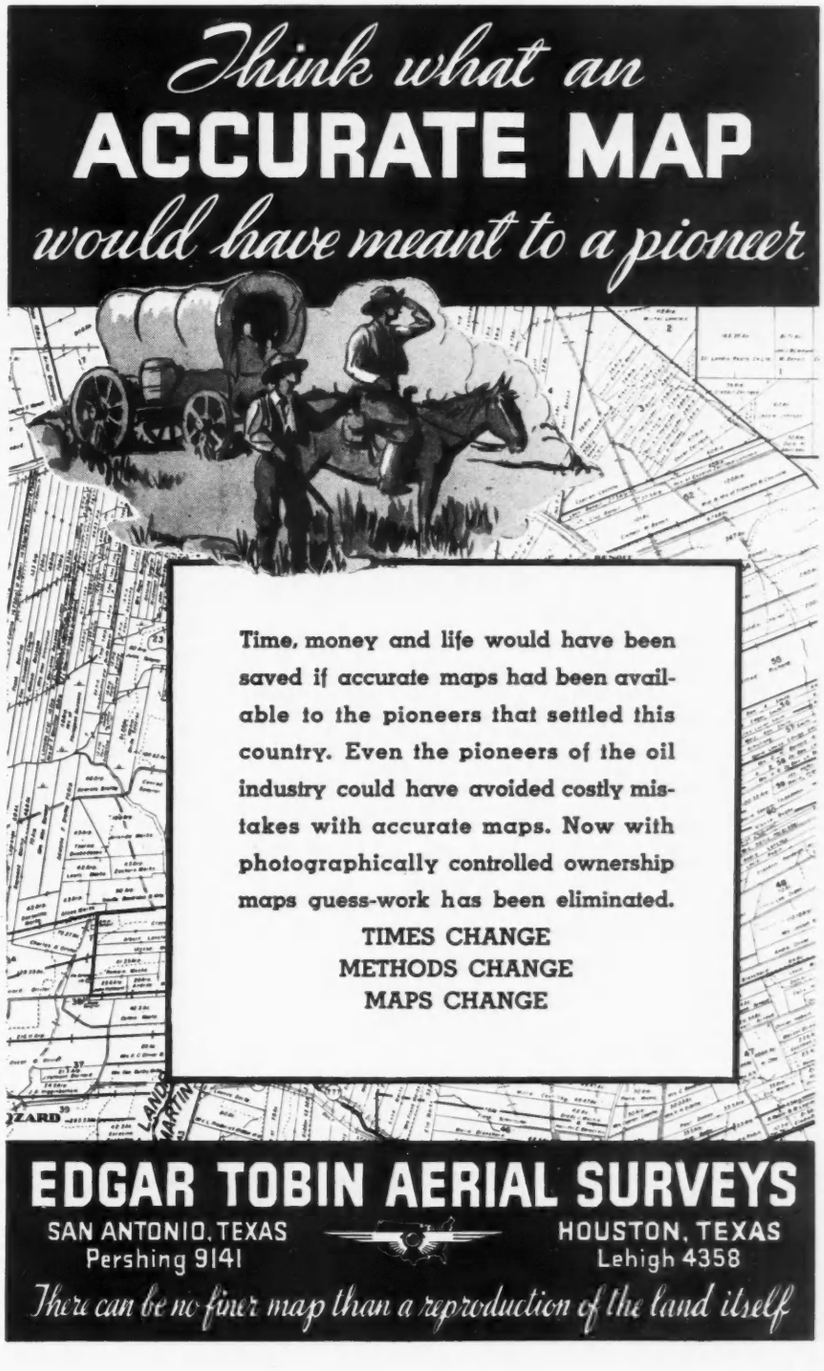
*Failures; †Junked; ¶Million cu. ft. gas.

87 COMPLETIONS

Set record for activity in South Texas district

San Antonio.—Headed by 87 completions, South Texas had another active and eventful week. The completion record was the highest for the year, including 71 oil wells for an initial production of 36,566 barrels. Twelve failures and four gassers made up the total.

Duval County was the leader, as usual, showing 28 oil wells for 15,707 barrels, along with one gasser and two failures. Nueces County had 18 oil wells flowing 10,620 barrels, one failure and one gasser.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MAPS CHANGE
EDGAR TOBIN AERIAL SURVEYS
SAN ANTONIO, TEXAS
Pershing 9141
HOUSTON, TEXAS
Lehigh 4358
There can be no finer map than a reproduction of the land itself

Webb County's 12 completions included two gassers, two failures and eight oil wells flowing 3557 barrels initially.

Rio Grande Valley's deep drilling campaign is getting to an interesting point with several more tests passing the 7000-foot mark during the week. A new deeper sand was definitely established through a completion in the Samfordyce field.

One wildcat two miles southwest of King Ranch field in Jim Wells County, set casing to test showings above 5550 feet. Benedum and Trees' Welder wildcat northeast of Sinton in San Patricio County, showed salt water in sand at 6100-16 feet, but the flow may be from poor cement job. A second producer in the Greta sand is expected in Taft field following a good showing on a drill stem test. Wildcats in San Patricio County are reaching critical depths.

In Nueces County, Corpus Christi field was extended and two pipe line projects were announced, giving the sector three outlets to deep water ports.

Several good producers were completed in Pearsall field, Frio County, although several more apparently are going to be light. Burleson County's deep Edwards lime wildcat was abandoned as a failure. Further revival of chalk development was the other feature of the Balcones fault zone.

Mirando district work featured a number of completions, failure of a key wildcat and the commencement of development work in another recently discovered field.

Pettus district recorded a series of wildcat failures. Two shallow wells blew out, making considerable gas.

COOKE LEASE BIDS

Austin.—Bids on 65 acres of land will be received on April 27 by the state board for leasing eleemosynary lands.

The tract is part of the land used for the State Training School for Girls at Gainesville. The board stated that there is a wildcat play near this tract where leases sold for approximately $100 an acre. The tract is in Cooke County.

TEXAS GULF COAST
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
AMELIA—		
Humble, Miller 2	*	6881
ANAHUAC—		
Humble, Tyrell 6	672	7085
Sun, White 11	651	7084
DICKINSON—		
Humble, M. Stewart A-7	840	8036
Magale Heirs 2	360	8040
HASTINGS—		
Humble, Cannon 1-B	624	6060
Stanolind, Grote 4	648	6084
Turner 4	351	6081
LIVINGSTON—		
Shell, Munson 1 (wo)	240	4332
MANVEL—		
Texas Co., Belcher B-2	500	5150
NORTH DAYTON—		
T. I. Whitley, Schindler 1 (wo)	*	761
SOUTH HOUSTON—		
Diademn-Sterling, Summers 2	430	4855
Smith & McDaniels, Reynolds 1	435	3971
TOMBALL—		
Humble, Gossett 4	168	5562
Tomball Townsite Unit 1	312	5591
J. E. Mabee, Baker 4	508	5577
POLK COUNTY—		
J. T. Lightfoot, Davidson 1, ne of Corrigan, Harris County School Land sur	*	3137

*Failures; †Junked; ¶Million cu. ft. gas.

Salt Water Appears

COTTON LAKE WELL MAKING FLUID; AMELIA TEST WILD

WEEKLY STAFF REPORT

Houston.—Salt water in the new discovery well at Cotton Lake, Chambers County, coupled with showings of oil in Glenn H. McCarthy's Longe 2, wild well at Amelia, Jefferson County, and several wildcats topping geological markers that makes them appear normal, held the interest of operators in the Texas sector of the Gulf Coast last week.

Salt Dome Oil Corporation and Gem Oil Company's Lawrence 2, discovery well at Cotton Lake, flowed at the rate of 17.75 barrels of fluid in 12 hours during the past week through open tubing and made from 12 to 18 percent salt water. At the end of the week the operators were pulling screen and liner to deepen. The test will be drilled to the Frio formation. Lawrence 2 produced oil from 10 feet of Marginulina sand.

Glenn H. McCarthy's Longe 2, north outpost test at Amelia, Jefferson County, ignited again April 24 from friction in the hole. This is the second time that the well has caught fire. There is little hole that the fire can be controlled unless a relief well is drilled, especially should the hole crater, as appears imminent. The well has been blowing gas, salt water and a small amount of oil. There have been reports the well is making from 3000 to 6000 barrels of oil daily. However, reports from the well state it is making a large volume of salt water and gas with an occasional spray of oil.

When it blew out Longe 2 caught fire but choked itself out with water, then started flowing salt water and gas. Later the well was making spasmodic sprays of oil.

To the south of the wild gas well, Humble Oil & Refining Company has announced location for S. Pinchback 1, 689 feet west of the most easterly south line and 1155 feet directly west of the discovery well in the C. Williams Survey.

Glen H. McCarthy has not only encountered trouble with his Longe 2 at Amelia but his Pitts 1, Winnie wildcat, J. M. Durran Survey, Chambers County, has pulled the derrick in and one of the crew was fatally injured. The well is now shut down at 6000 feet in shale while repairing derrick. It is reported the well has not encountered the Discorbis at 5921 feet.

Magnolia Petroleum Company's Funchess 1, Cheek area south of the Amelia field, Jefferson County, is drilling sand at 6271 feet without any oil shows. The well topped Discorbis at 5710 feet and the Heterostegina at 6216 feet. The well is running normal with other wells drilled in that area. Funchess 1 is 1650 feet south and 330 feet west of the northeast corner of the H. &. T. B. Survey, No. 16.

Amerada Petroleum Corporation and Stanolind Oil & Gas Company's Neal Esperson 1, Dear Park prospect, G. N. Patrick Survey, south of the Houston Ship Channel, Harris County, is drilling in sandy shale at 5455 feet. It topped Discorbis at 4888 feet, Heterostegina at 5120 and Marginulina at 5340 feet. The well is running normal with other wildcats drilled in the vicinity.

Humble Oil & Refining Company has made location for Middleton 18, southeast flank test to the Anahuac field, Chambers County. Middleton 18 is 1397 feet west of the east line and 1397 feet north of the south line of the H. & T. C. Survey No. 62. It is over 1½ miles from production.

Sun Oil Company completed White 11, J. McGehey Survey, for 651 barrels daily through a ¼-inch choke. Tubing pressure was 1060 pounds; casing pressure 1100 pounds. The well was drilled to 7084 feet in oil sand with the top of the pay found at 7010 feet. Gas sand was encountered at 6990 feet.

The Hastings field, Brazoria County, was extended one location northeast and one location west when Humble Oil & Refining Company and Stanolind Oil & Gas Company completed one well each on the two sides of the field.

Humble Oil & Refining Company's Cannon 1-B, H. & T. B. Survey, No. 36, was completed at 6060 feet in oil sand topped at 6013 feet and where 7-inch casing was set. The well came in for 26 barrels per hour through a ¼-inch choke with a tubing pressure of 800 pounds and a casing pressure of 850 pounds. The gas/oil ratio is 364 to 1. This test is located on the west side of the field.

On the northeast side of the field, Stanolind Oil & Gas Company's Turner 4, A. C. H. & B. Survey, No. 1, was completed at 6080 feet after topping pay at 6009 feet. Seven-inch casing was set at 6009 feet. Turner 4 made 351 barrels daily through a ¼-inch choke with a tubing pressure of 875 pounds; casing pressure 675 pounds.

Stanolind Oil & Refining Company also completed Grote 4, A. C. H. & B. Survey, No. 2, next to the fault which runs in the northwest and southeast direction across the field, for 648 barrels daily through a ¼-inch choke. Tubing and casing pressure registered 900 pounds.

Two new oil producers were completed by independent operators on the northwest and southeast side of the South Houston field, Harris County, during the past week. Smith & McDan-

nald's R. R. Reynolds 1, H. & T. B. Survey, No. 6, was completed at 3971 feet for 435 barrels daily through a ¼-inch choke with a tubing pressure of 475 pounds and casing pressure of 400 pounds. The well topped oil sand at 3950 feet. This is the second well for these operators in the field.

On the southwest side of the field, Diadem-Sterling's Summers 2 was completed for 430 barrels a day through a ¼-inch choke from 4855 feet. Tubing pressure was 500 pounds and there was no gauge on the casing. Top of the pay was found at 4807 feet. This new completion is a north offset to Diadem-Sterling's Dean 1, and is the third oil well to be completed by the operators.

A third independent operator has apparently found production in the South Houston field. Dick Schwab's Bennett 1, north offset to Smith & McDannald's Vallas 1, H. & T. B. Survey, No. 6, was coring oil sand at the end of the week after encountering the pay at 3990 feet.

Humble Oil & Refining Company completed two new oil producers in the Dickinson field, Galveston County. Maco Stewart A-7, 933 feet south of Maco Stewart A-3 and 933 feet east of Maco Stewart B-5, in the J. Sellers Survey, drilled into oil sand at 8021 feet and cored oil sand to 8035 feet. Seven-inch casing was set at 8017 feet. The well came in for 35 barrels per hour, which is one of the best wells completed in the field. The oil is flowing through a ¼-inch choke with a tubing pressure of 800 pounds.

Magale 2, J. Jones Survey, was completed for 15 barrels per hour through a ¼-inch choke. Tubing pressure was 450 pounds. The hole was drilled to 8040 feet in broken sand and shale showing oil. Seven-inch casing was set at 8037 feet. Cement plug was drilled to 8006 feet. Casing was perforated from 7989 to 8001 feet with 9 holes. After swabbing the well for some time it came in flowing 15 barrels per hour.

The Tomball field, Harris County, was extended approximately 1500 feet east during the past week when Humble Oil & Refining Company completed Gossett 4. The well was completed for 7 barrels per hour through a ¼-inch choke. The bottom of the hole is 5562 feet.

Two wildcat locations were announced last week. Dick Schwab made location for Kirby Lumber Company 1-A. It is 330 feet north and 330 feet west of the southwest corner of the F. Docette 150-acre tract on a 271-acre tract in the T. A. Sublett Survey, Polk County. Boone Brothers et al have made location for Thompson Brothers Lumber Company 1. It is 4750 feet from the northwest line and 4500 feet from the southeast line of Survey and 17,000 feet from river approximately 2000 feet northeast of the Old Hart Oil Company's dry hole in the J. Ortego Survey, Walker County.

One of the more important tests drilling on the Gulf Coast at present is Sun Oil Company's Lauter 1, southeast flank test of the Clay Creek field, Washington County.

Lauter 1 is a Woodbine test and will be carried to 10,000 feet if necessary to test the formation. At the close of the week the operators were drilling in shale at 3266 feet. The well had sand and shales showing oil at 1340 feet, from 1416 to 1427 feet, 1602 to 1664 feet, 2813 to 2844 feet, 2933 to 2956 feet and from 2956 to 2987 feet.

Atlantic Oil & Brace's E. E. Hardy 1, 3660 feet north of the discovery well, Hardin field, J. Robeson Survey, Liberty County, was shut down at the end of the week at 8071 feet after running an electrical logging device which failed to show anything. The well will probably be drilled down to 8500 feet.

Helmerick & Payne's Hawkins 1, D. A. McCarthy Survey, in the Sheppards Mott area, Matagorda County, has recemented casing from 6245 to 6250 feet. Plugs were drilled to 6279 feet, and casing perforated from 6250 to 6270 feet with 19 shots. Hawkins 1 tested 2 stands of oily water and 2½ stands of salt water.

Wm. Thompson's Scott 2, Dacus wildcat, F. A. Wheeler Survey, Montgomery County, cored a fine grey sand from 2949 to 2956 feet and recovered 7 feet of water sand. At the end of the week the operators were shut down waiting on orders.

MAY CANCEL PERMIT

Austin.—A hearing to consider cancellation of the permit issued by the Texas Railroad Commission to Yukon Oil Company will be held in Austin on April 30.

Yukon Oil Company operates pipe lines in and around Gladewater, Texas.

In a notice issued last week, the commission stated that reports had been received indicating that the line was not operated in compliance with railroad commission proration orders.

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Test In Graben

AT ENGLISH BAYOU-GILLIS SHOWING FOR PRODUCER

Lake Charles.—It appears the first well completed in the graben between Gillis and English Bayou fields, Calcasieu Parish, will be Fohs Oil Company's Salt Dome (Frost) 1. At the end of the week the crew was washing the well in and it was showing oil in commercial quantities.

Salt Dome (Frost) 1, was drilled to 7650 feet in salt water sand and plugged back to 5265 feet, where 10 feet of oil sand was cored some time ago. A drill stem test made of this sand showed 11 fourbles of 29.5 gravity oil with a pressure of 275 pounds. Due to mechanical difficulties the well was closed in after flowing 1½ hours, and the pressure built up to 1000 pounds. It was killed and the screen was pulled. Fohs decided to carry the well on down for deeper production. After encountering salt water at 7650 feet it was plugged back to 5265 feet. The operators drilled plugs and took in six feet of sand.

If salt water does not show up in this test and it produces oil in commercial quantities it will establish an entirely different type of production from that found in either Gillis or English Bayou field. The two fields are separated by two faults. The new production is coming from the sand within graben. Salt Dome Frost 1 is on the down through side of the fault south of the Gillis field and is producing from Marginulina sand. Gillis field produces from Marginulina sands.

A cross section of English Bayou-Gillis field was shown in the May 27, 1935, issue of THE OIL WEEKLY on page 63. The two faults shown run in a northeast and southwest direction and in a northwest-southeast direction.

F. Julius Fohs, president of Fohs Oil Company, worked in the area with torsion balance in June, 1933. He worked out the several faults in the area and blocked the acreage next to the faults. With the drilling of several wells the faults were established, and it appears that over 500 acres will be productive in the graben.

St. Martinville

Continental Oil Company's Fee 1, St. Martinville field, St. Martin Parish, cored a new oil sand last week from 7374 to 7394 feet and was drilling at the end of the week at 7490 feet in sand.

After coring the 20 feet of oil sand it was decided to explore for deeper producing horizons. Fee 1 has a large hole which will allow it to be drilled considerably deeper. Casing will be set and perforated at different levels after exploratory drilling is completed.

Fee 1 had showings of oil around 4982 feet. Several drill stem tests were attempted at this depth, but they proved unsuccessful. Seven feet of sand was cored from 4982 to 4990 feet. A showing of gas was found at 5924 to 5928 feet, and sandy shale carrying an odor of oil was cored from 7249 to 7253 feet. A sand showing oil was cored from 7276 to 7280 feet.

From 7394 to 7410 feet a showing of oil was encountered, the top section carrying a four percent saturation and the lower section, salt water. Salt water sand was cored from 7412 to 7416 feet. At 7476 to 7480 feet another oil sand was found.

An electrical logging device showed 12 ohms from 7256 to 7261 feet. From 7267 to 7292 feet nine ohms was shown, and from 7292 to 7314 feet, five ohms. The sand from 7343 to 7367 feet showed from 26 to 12 ohms.

Fee 1 has cored approximately 160 feet of sand from 7256 to 7476 feet, and considering the electrical logging device showing, it is believed that the well will produce in commercial quantities.

Continental Oil Company's Fee 1 is 1980 feet north of the discovery well and is 990 feet north and 990 feet west of the southeast corner of a 172-acre tract in Section 18-11s-6e.

Tide Water Oil Company's Smedes 2, 660 feet south and west of the discovery well, Section 57-11s-6e, made a drill stem test during the week from 6823 to 6833 feet and showed salt water in 20 minutes through ¼-inch chokes on top and bot-

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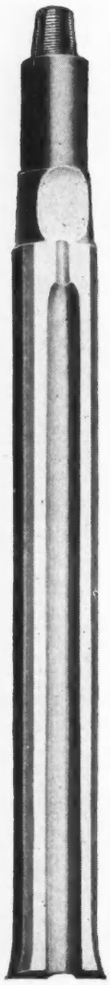

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CABLE TOOLS

tom. The operators recovered two stands of mud and 41 stands of salt water. At the end of the week the operators had plugged back to 6656 feet and were measuring up to perforate.

Superior Oil Producing Company's Bradley 2, Bayou Mallet field, Section 51-7s-1e, Acadia Parish, was coring shale at the end of the week at 7178 feet and should be down to the deep sand which was found in Adams Smith 1, completed a gas and distillate producer from 7190 to 7198 feet.

Bradley 2 passed up the oil sand which was found in Bradley 1 at 6385 to 6390 feet. The hole will probably be carried below the two producing horizons and casing will be perforated at the different levels. Bradley sand was cored from 6387 to 6397 feet where an electrical logging device showed 7½ ohms. However, the lower section of the sand carried salt water.

Herton Oil Company completed Roane 3, Jeanerette field, St. Mary Parish, during the past week at 6688 feet for 760 barrels daily through a ¼-inch choke. Tubing pressure was 1035 pounds; casing pressure 1045 pounds. Top of the pay was found at 6668 feet. Seven-inch casing was set at 6673 feet.

Herton Oil Company has made locations for Banta 2 and 3. Banta 2 is 825 feet south and 1097 feet west of Roanes 2, Section 40-13s-9e. Banta 3 is 850 feet north of Banta 1.

In Iberia Parish, The Texas Company has made a second location at Fausse Point. State 2 is 3550 feet east and 2390 feet south of the northwest corner of Section 35-11s-8e. It is 600 feet north of State 1, which was abandoned at 6405 feet after having a showing of oil at 3807 feet.

The third commercial oil producer was completed in Garden Island Bay field, Plaquemines Parish, by The Texas Company last week when Garden Island Bay 18 came in flowing 1092 barrels of pipe line oil daily through a ⅜-inch choke. The hole was carried to 4511 feet in oil sand. Top of the sand was found at 4483 feet. Nine-and-five-eighths-inch casing was set at 4483 feet.

Garden Island field has three producing horizons, found at 4552 to 4590 feet, 4615 to 4644 feet, and 4913 to 4930 feet. All three of the producing horizons are Miocene.

Loffland Brothers et al's L. C. Bowles 1-A, west side of Tepetate field, Section 28-7s-2w, Acadia Parish, was temporarily abandoned during the past week at 8379 feet. The well had dry sands from 8361 to 8379 feet, but at 8353 feet a sand was cored which showed oil, and on an electrical logging device it registered 5 ohms.

Continental Oil Company was preparing to complete A. Ortego 1, Section 29-7s-2w, at the end of the week after coring oil sands from 8298 to 8321 feet. A gas sand was cored at 8262 feet. After setting 5¾-inch casing at 8321 feet, Ortego 1 was perforated from 8316 to 8321 feet. Tubing was being run April 23. The same company's Young 1, Section 29-7s-2w, was coring oil sand at 8310 feet at the end of the week.

The Texas Company's Terrebonne Bay 2, which recently discovered a new producing sand at 6838 feet in Caillou Island field, Terrebonne Parish, was flowing at the rate of 1000 barrels daily through a ⅜-inch choke the past week.

The well was drilled to 6862 feet in the new sand. Seven-and-five-eighths-inch casing had been set at 6844 feet with 450 sacks of cement. The casing was perforated from 6828 to 6840 feet with 32 shots and from 6816 to 6828 feet with 40 shots. Terrebonne Bay 2 came in making 1503 barrels of pipe line oil daily through a ⅜-inch choke. The oil tested 35.7 gravity at 76 degrees F. Tubing pressure registered 1180 pounds.

SOUTH LOUISIANA
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CAILLOU ISLAND—		
Texas Co., Terrebonne Bay 2	1500	6862
CAMERON MEADOWS—		
Texas Co., Miami 2	400	4101
GARDEN ISLAND BAY—		
Texas Co., Garden Island 18	1092	4511
LAFITTE—		
Texas Co., Rigolette 3	1600	9453
LAKE HERMITAGE—		
Harry Fotiades, State 1	*	lcn.
PORT BARRE—		
Pantheon Oil Co., Gaudet 1	*	3718
SULPHUR—		
Union Sulphur, Fee 779 (wo)	586	3780
Fee 789 (wo)	882	3192
Fee 823	375	2994
TEPETATE—		
Continental, Homeseekers 2	336	8322
Loffland Brothers, L. C. Bowles 1-A	*	8379
WEST FELICIANA PARISH—		
Robert L. Morris, Retreat 1, sec 89-1s-4w	*	6058

*Failures; †Junked; ¶Million cu. ft. gas.

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Six New Oil Wells

RODESSA COMPLETIONS FOR WEEK ARE QUITE ROUTINE

WEEKLY STAFF REPORT

Shreveport.—Six new oil wells, none of which extended the producing limits materially, were completed in the Rodessa field last week to give that field 142 oil wells. Six new locations were announced, including two in Cass County. On Wednesday, April 22, there were 61 drilling wells in the field, six rigging, six derricks up and 13 "active" locations.

The wells completed last week were: Haynes-Standard Oil Company's Lawton 11, SW SW 14-23n-16w, flowing 147 barrels per hour through 1¾-inch tubing choke with tubing pressure 100 pounds and casing pressure 500 pounds, depth 6012 feet; Marr and associates' Peak 1, SE SW SE 11-23n-16w, a north edge well, 55 barrels per hour through ½-inch tubing choke with tubing and casing pressure both 550 pounds, depth 6040 feet; United Gas Public Service Company, Ardis 6, Section 14-23n-16w, flowing 58 barrels per hour through ½-inch tubing choke with tubing pressure 250 pounds, casing pressure 340 pounds, depth 6037 feet; United Gas Public Service Company's Tyson 8, SE SW NW 13-23n-16w, flowing 17 barrels per hour through ¼-inch tubing choke with tubing pressure, and casing pressure, 400 pounds, depth 6055 feet; United's Tyson 9, SW SE SE 11-23n-16w, north edge well, flowing 55 barrels per hour through ½-inch tubing choke with tubing pressure 300 pounds, casing pressure, 375 pounds, total depth 6032 feet, and United's Rodessa 15, Section 23-23n-16w, flowing 69 barrels per hour with 20 percent fresh water through ½-inch tubing choke, tubing pressure 470 pounds, casing pressure, 300 pounds, total depth 6016 feet.

The new locations were: Cass County—American Liberty Oil Company's D. A. Maxie 4, John Collum Survey, a direct west offset to McElvain and Beckett's Maxie 1, located 290 feet west of east line of John Collum Survey; United Production Corporation's Eva Fields 3, John Collum Survey, located 330 feet south of the north line and 1650 feet west of east line of Eva Fields 61.7-acre tract. Caddo Parish—Marr and associates' Peak 2, SW SE 11-23n-16w; United Gas Public Service Company, Brewer 3, SW SW 21-23n-16w; Pitts 5, NW SE 13-23n-16w; and Pitts 6, SW SE 13-23n-16w.

In the Rodessa townsite, Section 23-23n-16w, Lyons and Neely completed Blaxton 1, at 6008 feet which gauged eight million cubic feet of gas with five barrels of distillate per hour through ¼-inch tubing choke with tubing and casing pressure each 1500 pounds. A short string of casing probably will be set and efforts made to make an oil well. Travis and Associates' Norton Estate 1, NW NE SW 17-23n-15w, in the northeast offshoot of the field was completed at 6080 feet making 15 million cubic feet of gas and 200 barrels of distillate per day through ⅜-inch tubing choke with tubing pressure 2200 pounds and casing pressure, 2300 pounds. Operators plan to kill the well and run a string of casing.

United Gas Public Service Company last week recompleted Poole 1, NE NE 21-23n-16w, which made 667 barrels of oil in a 24-hour period through ½-inch tubing choke with tubing pressure 110 pounds and casing pressure, 650 pounds. Depth is 6015 feet.

During four days last week production figures from Rodessa were as follows: 47,740 barrels from 136 wells; 48,389 barrels from 137 wells; 48,540 barrels from 140 wells; and 48,515 barrels from 141 wells.

Eastern Texas Pipe Line Company is reported to have delivered 50,000 barrels of Rodessa oil to Tidewater Oil Company at Longview, Texas, and when twice this amount has been delivered movement to Gulf Coast points will be begun. Eastern Texas is processing approximately 1600 barrels of Rodessa crude daily at its Longview refinery. It is understood that Eastern Texas asked for tenders on gasoline from this crude based on a 63-69 percent recovery and after experiments at a plant at Longview and a refinery at Bossier City, Louisiana, the commission granted tenders based on a 45 percent recovery.

A new casing head plant to cost approximately $1,200,000 is reported to be contemplated at Rodessa by United Gas Public Service Company, which would appear to put at rest rumors that United might sell its Rodessa oil holdings. Blackwell Oil & Gas Company is contemplating a small casing head plant on its Nugent lease in Section 8-23n-15w, near Ida.

Field Plants

East Texas Production Company's plant at Rodessa is producing 5400 gallons daily of casing head gasoline and Shoreline Refining Company's cracking plant at Lewis, Caddo Parish, is expected to be in operation by June 15. Griswold Refining Company is moving most of its Rodessa crude purchases to its refinery at Cedar Grove, Shreveport suburb. Pelican Oil & Gasoline Company's casinghead plant in Section 14-23n-16w, at Rodessa, is nearing completion and probably will be in operation next week.

Griswold Refining Company now has Marr and Perkins' connections from the Hunter lease at Rodessa that formerly were hooked up with Standard Pipe Line Company.

Magnolia Petroleum Company has formally taken over the operation of its recently acquired Rodessa holdings bought from R. W. Norton, and Standard Oil Company of Louisiana has taken over the Rodessa properties it bought from Haynes Production Company, whose entire stock it acquired.

Arch Haynes, president of Haynes Production Company, was stricken ill just before the sale of these properties was closed and final papers were signed from his sick bed. He is convalescing at his home in Shreveport.

Several geophysical surveys in North Louisiana around old shallow fields are under way to get pictures of possible deep producing potentialities of those fields.

Around the Cartersville oil-gas field in Bossier Parish and around the Sarepta gas field, Webster Parish, Stanolind Oil & Gas Company has a seismograph crew at work. In Claiborne Parish, Phillips Petroleum Company has a seismograph unit working around Haynesville field, which produces from the Blossom sand at around 2800 feet and has two wells producing from the lower Cretaceous. In Bossier Parish, Magnolia Petroleum Company continues to keep a seismograph unit in 23n-13w, and in the northeast part of the parish; Amerada Petroleum Corporation has a geophysical crew at work in 22n-11w. In DeSoto Parish, Ohio Oil Company has a shooting crew in 13n-16w, and Gulf Oil Corporation has a shooting unit working in DeSoto and Red River Parishes in 12 and 13n-10 and 11w. Another geophysical party is working in 13n-13w.

Survey Obligations

R. G. Smitherman of Shreveport, who has assembled a 10,000-acre block centering around Section 15-16n-1w, Jackson Parish on which he must spud a Trinity test before September 1, must make a seismic survey of the block before that time. It is reported that G. W. Zeigen, who recently secured leases on 103,000 acres of

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Louisiana Central Lumber Company land in Jackson and surrounding parishes, has given Gulf Oil Corporation a geophysical option on the holdings and the latter must begin a seismic survey by May 1. Under terms of the option, Gulf Oil Corporation may retain from 3500 to 5000 acres of the holdings, and if it does so must spud 3 months after assignment with drilling obligation to go below the anhydrite. Arkansas-Louisiana Gas Company has a seismograph crew in Jackson Parish in 15n-1w. In Natchitoches Parish, Seaboard Oil Corporation's shooting crew continues to work in 11n-7 and 8w.

In Winn and LaSalle Parishes, Shell Petroleum Corporation has taken a geophysical option on 46,000 acres of Urania Lumber Company holdings in townships 10, 11, 12, and 13, ranges 1e and 1w, with an option to lease the acreage for $3 per acre. Also in Winn Parish, Gulf Oil Corporation is shooting in 13n-3w.

While not verified, it is reported that Stanolind Oil & Gas Company and Gulf Oil Corporation have taken all unassigned leases of Bodcaw Lumber Company in North Louisiana. These are in a number of parishes, particularly in the North Louisiana Basin.

Standard Oil Company of Louisiana has taken a block in 18n-8w, Bienville Parish, and Ed Zilkey of Tyler, Texas, is leasing in 18n-7w. The Texas Company is taking some leases in the same general area. In the same parish, Gulf Oil Corporation has taken over 4000 acres of leases in 14n-7 and 8 west. R. W. Williams of Shreveport has leased several hundred acres in the same parish in 14 and 15n-4 and 5 west.

6000-Foot Test

East of the Elm Grove oil-gas field, Bossier Parish, Shell Petroleum Corporation has taken a block in 16n-11w.

In Caldwell Parish, A. Campbell of Kansas City, Missouri, has a 7000-acre block centering around Section 41-14n-4e, for a 3500-foot test that may go to 6000 feet. Sun Oil Company is leasing in the same general area.

On the east flank of the old Homer field, Claiborne Parish, that produces from the Nacatosh and Blossom, Gulf Oil Corporation recently took 1200 acres of leases. Eastern Texas Production Corporation took 250 acres of the holdings of J. F. Magale in 23n-7w, northeast of Haynesville.

In Tensas Parish, H. M. Jones of Shreveport was shut down for fuel at 700 feet in basal Jackson last week in Chicago Mill & Lumber Company 1, Section 30-12n-10e, which is the first of three 3000-foot tests on his 32,000-acre block. The third of the tests must be spudded by next September 1.

Lion Oil Refining Company is taking a few leases in Union Parish in 23n-3w.

Considerable leasing is going on in 20n-9w, Webster Parish. Among those taking acreage in that area are Pelican Oil & Gasoline Company, The Texas Company, J. C. O'Brien, and Boyce McCandless of Houston, Texas.

Thirty drilling permits were authorized last week by the minerals division, Louisiana Conservation Commission. Of these 11 were for North Louisiana divided among the following parishes: Caddo, 4, all in Rodessa; Grant, 1; Morehouse, 2, and Sabine, 4, all in Converse. Those in South Louisiana were divided among the following parishes: Acadia, 3; Calcasieu, 4; Cameron, 2; Iberia, 4; Iberville, 1; Jeff Davis, 1; LaFourche, 1; St. Bernard, 1; St. Mary, 1, and St. Landry, 1.

NORTH LOUISIANA Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CADDO PARISH (Rodessa)—		
Haynes-Standard Oil Co., Lawton 11, 14-23n-16w	6000	6012
Marr et al, Peak 1, 11-23n-16w	6000	6040
United Gas Pub. Serv. Co., Rodessa 15, 23-23n-16w	5000	6016
Ardis 6, 14-23n-16w	5000	6037
Tyson 8, 13-23n-16w	3000	6055
Tyson 9, 11-23n-16w	5000	6032
LINCOLN PARISH—		
Ark.-La. Gas Co., Causey 1, 32-19n-2w	*	4687
RAPIDES PARISH (Cheneyville)—		
Texas Co., Weil 2, 53-1s-2e	385	5732
GRANT PARISH (Urania)—		
T. A. W. Oil Corp., Long 1, 9-9n-1e.	*	1575
MOREHOUSE PARISH (Monroe)—		
United Gas Pub. Serv. Co., Crossett Lbr. Co. 33, 34-21n-4e	¶5	2145
Tensas Delta Lbr. Co. 19, 9-21n-4e.	¶7	2148
SABINE PARISH (Converse)—		
J. E. Doughtie, Tr., L. E. Edwards 3, 29-9n-13w	560	1700
Posey Sisters Oil Co., A. J. Burkett 2, 10-9n-13w	5	1973
SABINE PARISH (Zwolle)—		
H. C. Maulding, W. D. Davis 1, 2-7n-11w	*	400
UNION PARISH (Monroe)—		
Interstate Nat. Gas Co., Fee 46, 25-20n-3e	¶6	2161

*Failures; †Junked; ¶Million cu. ft. gas.

Important Strike

FIRST PERMIAN PRODUCER IN ARKANSAS IS COMPLETED

WEEKLY STAFF REPORT

El Dorado, Ark.—Completion of the first commercial well in the Permian in Arkansas or Louisiana last week by Phillips Petroleum Company in J. D. Reynolds 1, SE NW 27-15-15, Ouachita County, Arkansas, northeast of the shallow Smackover field, whose discovery well was drilled in 1922 in Section 28-15-15, is termed by oil men as the most important development in the Arkansas - North Louisiana territory since the discovery of Rodessa as an oil field in July, 1935.

Phillips' new well was completed at 4909 feet, 12 feet in porous oolitic lime immediately at the top of the Permian, making an estimated 10,000,000 cubic feet of wet gas daily through one-quarter-inch tubing choke, with closed-in pressure of 1820 pounds on both tubing and casing. It also made considerable distillate. Elevation is 176 feet. Nine and five-eighths inch casing was cemented at 4892 feet.

On a subsequent test the well made 12,000,000 cubic feet of gas and about 10 barrels of distillate per hour through a ½-inch tubing choke, the distillate being 61 gravity. With the well open, the color of the distillate increased to a very light green crude oil. The well is now shut in, awaiting connections.

Two immediate tests for the top of the Permian lime in this area are expected. Standard Oil Company of Louisiana, which owns NW SW 27-15-15, is expected to make an immediate location, as is E. M. Jones on his holdings in Section 21-15-15. It is believed that Phillips' next geophysical location to be drilled will be on the O. B. Norris lease, Section 28-16-12, center of a block.

Phillips made location for J. D. Reynolds 1 after the area was shot by a geophysical party. The well was drilled with an electrically operated rig, an innovation in Arkansas.

Correlation with two of the three other deep tests drilled in south Arkansas shows the following: Gulf Refining Company's Werner 49, Section 5-16-16, Union County, Smackover field, with elevation of 128.5 feet, logged top of the Permian lime at 5920 feet and was abandoned in black igneous rock at total depth of 7973 feet after logging a salt body from 6631 to 7488 feet and picking up the top of the black igneous rock at 7938 feet. This is the deepest test ever drilled in North Louisiana or Arkansas.

In the center of the Rainbow City (Champagnolle) field, Union County, H. L. Hunt, Inc., went to 6911 feet in Gregory 15, Section 10-17-14. It was abandoned at 6911 feet in rock salt. With elevation of 180 feet it logged top of the Permian at 5937 feet. Lion Oil Refining Company's Hayes A-9, Section 4-16-15, Union County, Smackover field, had a crooked hole and therefore is not of as much value in correlation although it went to Permian rock salt and was abandoned at 7255 feet.

Although the structure on which Phillips' J. D. Reynolds 1 was drilled is reported to lie southeast-northwest as revealed by the shooting picture, the regional dip of the Permian, as well as the Trinity, in south Arkansas and North Louisiana is to the southwest. When the Trinity reaches a point near the outcrop as it does in south Arkansas, the present well indicates that Permian lime producing possibilities exist, and furthermore that such Trinity "highs" as Pine Island, Caddo Parish; Sligo, Bossier Parish; and

Simsboro, Lincoln Parish, have additional producing potentialities in the Travis Peak (basal Trinity) besides the Permian lime. These latter "highs" are used as examples, for they are shallow compared to Rodessa, which, furthermore, is producing as a result of a fault. That 10,000-foot tests for basal Trinity and Permian lime production will become comparatively common in this territory around these Trinity "highs" is expected. One year ago, 6000-foot tests were very much the exception in North Louisiana, but Rodessa changed that idea.

Before the discovery of oil in large quantities at Rodessa, the Trinity lime had been looked upon with suspicion. The fact that it is now producing consistently can be traced to improved exploration methods and improved drilling methods and equipment.

The Permian lime produces in the West Texas Basin.

MARATHON DEAL

Involves half interest in Rodessa trend block

Shreveport.—Marathon Oil Company has bought from Ed S. Holman, half interest in a 3000-acre block centering around the R. Bennington Survey, Marion County, Texas, in the southwest Rodessa "trend." The consideration was not announced but it is said to have been much larger than the amount Gulf Oil Corporation paid Holman for the other half of the acreage several weeks ago, the latter consideration having been $50 per acre cash and $200 per acre from production.

American Liberty Oil Company paid $500 per acre cash and $1000 per acre from a quarter production for the northwest 27 acres in the J. H. Rives Survey, Cass County, near its Rambo 1 in that survey, now drilling below 5700 feet.

Grady Vaughn, head of Vaughn Production Company, is reported planning an early test in the Charles Ames Survey, Cass County, east of the village of Lodi, the tentative location being in the east half of the J. M. Delote 125-acre tract.

Shreveport. — Ohio Oil Company's proposed 10,000-foot test in the Cotton Valley field, Webster Parish, was nearing North Louisiana's depth record of 7154 feet last week when it was reported drilling in red shale at 7112 feet. The test is R. L. Holloway 6, NE SW 23-21n-10w. The North Louisiana depth record was set three years ago in R. L. Gay, Trustee's, Long-Bell Lumber Company A-1, NW NW 10-8n-13w, Sabine Parish.

LEASES BLOCKED

Three tracts taken in two Arkansas counties

El Dorado, Ark.—Three blocks of wildcat acreage were assembled last week in two south Arkansas counties. Two of the blocks were in Hempstead County and the other was in Nevada County. In Hempstead County, V. Foster of Hope has assembled 8000 acres in 12 and 13s-25 and 26w, and in the same county M. D. K. Fitzwater has a block of similar size centering in Section 18-11s-24w, on which he agrees to spud by May 15. It centers around A. H. Tarver's Swafoord 1 in that section abandoned at 2944 feet in what was identified as the Trinity.

In Nevada County, J. L. Duncan of San Antonio, Texas, and W. B. Staley of Fort Worth, have taken a 6000-acre block and spudded Munn 2, SE NE 28-14-22, to a depth of 300 feet. This test may go to the oolitic lime or even to the Travis Peak.

In Columbia County, E. W. Russell is leasing in township 15, range 22. In Ouachita County on the northeast flank of the old Smackover structure where Phillips Petroleum Company last week completed a wet gasser in Permian lime at 4908 feet, Arkansas-Louisiana Gas Company and Lion Oil Refining Company got the jump on other lessors and before the well was completed were buying acreage in Sections 13, 14, 15 and 26-15-15, paying $35 cash and $65 from production. Phillips' gasser, J. D. Reynolds 1, is in Section 27-15-15.

In Miller County, near Rodessa, Standard Oil Company of Louisiana continues to do geophysical work. A. V. Erwin is adding to his block in township 17, ranges 25 and 26. In Union County, near Mount Holly Junction, Phillips Petroleum Company has a seismograph unit working.

CHENEYVILLE-BUNKIE

Alexandria, La.—The fourth oil producer for Cheneyville-Bunkie field, Rapides Parish, was added last week by The Texas Company's Weil 2, Section 53-1n-2e, completed at 5732 feet, flowing 16 barrels of oil per hour through ¼-inch tubing choke, with tubing pressure 600 pounds. Seven-inch casing was cemented at 5714 feet. Weil 2 offsets to the west Amerada Petroleum Corporation's producer, Weil 2.

Lea Work Increases

PROLIFIC PRODUCTION AND EXTENSIONS ATTRACTIVE

WEEKLY STAFF REPORT

Hobbs, New Mexico.—Operations in Lea County continue to show rapid gains each week, with the sandy-lime producing horizons near the towns of Eunice and Jal commanding a big share of the new field work. There were 14 oil producers completed in the county the past week, and during the same period work commenced on 17 new locations, including 8 for the Monument field, 6 in the Eunice field, and 3 in the sandy-lime belt. The county was credited with 12 new locations the week previous. Completed wells average in cost approximately $40,000 when fully equipped.

Greater importance is attached to the sandy-lime belt as a source of production in the county since Culberson, Erwin & Stovall's J. R. Stuart-Repollo 1, C SW SE 10-25s-37e, situated three three miles northeast of Jal, boosted its production to about 100 barrels of 34.7 gravity oil per hour and 10,000,000 cubic feet of sweet gas daily. Oil pay was encountered late last March at 3280 feet, or 175 feet below sea level, and tools were lost when the well began flowing by heads at 3294 feet. Agitation arising from efforts to recover tools and a string of fishing tools stimulated the production to the highest level that has been recorded by previous completions in the sandy-lime zone. Owners were forced to kill the flow of oil and gas the past week.

Sun Oil Company's J. R. Stuart 1, C NW NE 15-25s-37e, a south offset, began drilling April 23, using rotary as the 160-acre lease is slated to expire in May. Location has also been made by this company for B. T. Lanehart 1, C SE SE 20-25s-37e, located one-half mile north by east of The Texas Company's Lanehart 1, which is attempting to lubricate off an estimated flow of 75,000,000 cubic feet of dry gas from lime at 2770 feet so as to deepen to the oil horizon.

Plains Production Company's R. L. Mosley-Repollo 1, C NW SE 34-24s-37e, about two miles north of the producer on the Stuart tract, excluded bottom-hole water in plugging back from 3551 feet to 3530 feet and flowed 20 barrels high gravity oil daily by heads. Water was found at 382 feet sub-sea. Plains Production Company's Geo. Smith-Humble 1, C SE SE 4-25s-37e, was reported making 10,000,000 feet of dry gas while drilling in lime at 3075 feet. Liberty Oil & Drilling Company's J. W. Hair-Repollo 1, SW SW SE 24-24s-37e, occupies a low structural position, and has recorded only small volume of gas in drilling to the 3400-foot level.

Gulf Oil Corporation's W. T. McCormack 1, C NE NE 32-21s-37e, is the second test authorized by the company for the sandy-lime belt immediately north of the town of Eunice.

Harry W. Leonard et al's Lanehart 1, C SW NE 21-25s-37e, located about one mile east of the town of Jal, is reported to have deepened to 3005 feet, and on 22-hour production gauge through separator produced 22 barrels oil and gas at rate of 18,000,000 cubic feet daily. C. & G. Oil Company et al's Ellen Weir 1, C NE NE 14-20s-37e,

was preparing to run 9⅝-inch pipe near the 1500-foot level.

Eunice Is Extended

Extension of the Eunice field, which produces from dolomite lime, one location to the north and along a direct strike towards the Monument field, became virtually assured the past week when The Texas Company's State-Aggie 1, C SE SE 31-20s-37e, recorded a normal structural position in penetrating the saturated lime zone to 3852 feet, or 302 feet sub-sea. Operations were halted to treat with acid. Shell Petroleum Corporation's State 1-J, C SE SW 32-20s-37e, situated one-half mile to the east, is starting operations. Atlantic Oil Producing Company's State 1-K, C SE SW 6-21s-36e, is a new location for the west flank of the north end of the field. Gulf Oil Corporation authorized three new tests, including Frona Leck 1, C NW NE 14-21s-36e, one location east of the most easterly producer in the field. The latter also is starting up on State-Bell-Ramsey 9, C Lot 5, 4-21s-36e, and State-Arnott-Ramsey 7-C, C NW NE 21-21s-36e. Repollo Oil Company's State 6-176, NE NE NW 19-21s-36e, is near the center of the west flank of the field.

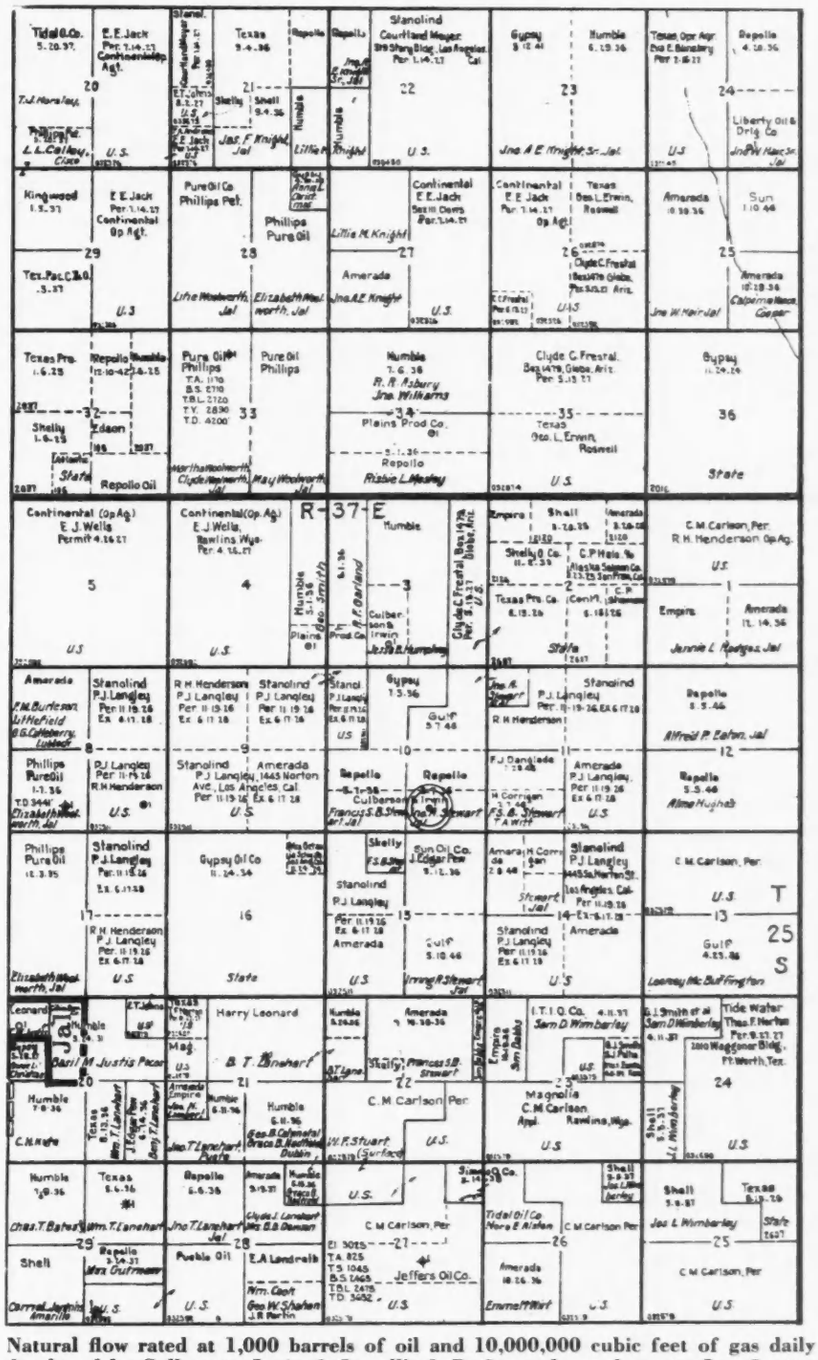
Using 16,000 gallons of acid solution by stages, Shell Petroleum Corporation's State 1-H, C SE SE 13-21s-35e, west edge location for the Eunice field, flowed 109 barrels oil and 18 barrels water in 24 hours from lime at 3954 feet, or 351 feet sub-sea. It will be plugged back for further testing. The same company's State-Endura 1-D, C SE NW 11-21s-35e, tested dry at 3962 feet, or 358 feet sub-sea, but deepened beyond 3970 feet.

The Monument field was widened one location to the west the past week by completion of Continental Oil Company and The California Company's J. L. Reed 1-A-3, C NE NE 3-20s-36e, from lime at 3839-3896 feet, with an elevation of 3622 feet. This outpost gauged 30 barrels oil hourly, flowing through casing with drill pipe in the hole, and gas production was rated at 1,800,000 cubic feet daily. Amerada Petroleum Corporation's C. H. Weir 4, C SE NW 35-19s-36e, situated on the northwest flank of the producing area, gauged 246 barrels oil in five hours through one-inch tubing choke from lime at 3945 feet after using 1000 gallons of acid. It was rated at two barrels per hour natural. Four locations were staked the past week by Amerada Petroleum Corporation for the Monument field. They are: State 3-D, C SE NW 1-20s-36e; State 4-O, C NE NE 30-19s-37e; State 1-T, C SE SW 25-19s-36e; and J. R. Phillips 3, C SW NE 1-20s-36e.

Anderson-Prichard Production Corporation's H. M. Britt-Conoco 1-A, C SE SW 6-20s-37e, offsetting big producers in the southeast portion of the Monument field, was reported flowing 10 barrels per hour natural while cleaning out at 3880 feet, or 305 feet sub-sea. Operations have been started by the company on Britt-Conoco 3, SE SW NE 7-20s-37e. Gulf Oil Corporation's State-Luthy 1, C SW NW 29-19s-37e, used 2000 gallons of acid in lime at 3830-3946 feet, and gauged 72 barrels oil in three hours through open tubing. It will be acidized a second time. Continental Oil Company is rigging up rotary to drill State 3-C-30, C SE NW 30-19s-37e; and State 4-C, C SW NW 30-19s-37e.

Production allowable of all non-marginal wells in Lea County sharing in the market outlet provided by four major pipe line companies was reduced effective 7 a.m. April 16, in order to permit new completions to participate and at the same time hold the state's output within the 71,000 barrels daily quota authorized for the month by the New Mexico Oil Conservation Commission. Hobbs field, which uses average unit potential and acreage as factors in apportioning allowable, was cut from 26,843 barrels to 26,267 barrels daily, or an average of about 104 barrels daily per well. Individual wells in this field have allowables ranging from 5 to 237 barrels daily. The maximum is assigned to Gulf Oil Corporation's Warren Graham 1, SE SE NE 24-18s-37e, which has a rated potential of 25,143 barrels.

Miscellaneous Lea County areas, involving 411 producers on separate 40-acre units, are prorated on a flat well allowable basis. Effective 7 a.m. April 16, according to C. G. Staley, umpire,



Natural flow rated at 1,000 barrels of oil and 10,000,000 cubic feet of gas daily developed by Culberson, Irwin & Stovall's J. R. Stuart 1, southeastern Lea County wildcat, indicated by circle on map, ranks as the largest producer from the sandy-lime horizon. (Map courtesy Zingery Oil Map Company, Fort Worth.)

the daily quota per well was cut from 112 to 108 barrels. Wells incapable of pumping or flowing 108 barrels daily are not subject to production restrictions.

Development work on proved and semi-proved locations in Lea County is assuming greater proportions each week. The crude market is not being expanded sufficiently to absorb the new wells arising from the active drilling operations, thereby making it necessary for the Commission to impose a horizontal reduction in the allowable of all non-marginal wells. A number of operators are advancing their drilling programs in order to amortize their investment before the well allowable drops to a critical level.

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New Fault Block

FOUND IN BIG HORN BASIN OF NORTHERN WYOMING

Lovell, Wyo.—Another fault block in the Big Horn Basin black oil country of northern Wyoming appeared this week for commercial production when Sidney H. Keoughan and Taylor Oil Company's Hoskins 1, extension well on the south fault block of Byron Dome, recovered oil saturated cores in the Embar and Tensleep formations.

Hoskins 1, Lot 59, SE SE 25-56n-97w, cored the Embar at 5254-5310 feet and the Tensleep at 5354-5366 feet. It is shut down waiting on cement to set around 6⅝-inch casing set in the top of the Embar. Well is three miles southeast of production on the north fault block of Byron Dome. Interposed between the fault blocks is a downthrow block untested.

Kinney Coastal Oil Company's Government 3, SW NW NE 24-56n-93w, on a northwest fault block of Garland anticline, Park County, is being shot with nitroglycerine in the Tensleep sand at 4245-4338 feet, where it made 35 barrels of black oil and 3,000,000 cubic feet of gas daily. This is the first well drilled to production on the fault block and the first well to develop oil in the Tensleep at Garland. Oil is developed on the south fault block of Garland in the Madison lime. Gas only had been developed in the Embar and Tensleep at Garland.

After failing to make headway in controlling a wild gasser by pumping water through crevice wells, the Stock Oil Company released location this week for a directional hole for Allen 1-X, 420 feet due east of the burning gasser, Allen 1, SE NW SE 35-56n-98w. Allen 1 went out of control January 19, and is blowing an estimated 60,000,000 cubic feet of gas daily from the Embar-Tensleep at 3815 feet. The well ignited five weeks ago. The hole is bottomed at 3838 feet, with 1115 feet of drill stem frozen at bottom.

Ohio Oil Company's Byron-Union 4, CS NE 25-56n-97w, Byron field, Big Horn County, is milling on 55 feet of tubing cemented in the bottom of the well when it was plugged back to 5714 feet from bottom hole water at 5735 feet in the Tensleep. Robert Till 1, CSE SW 24-56n-97w, is drilling at 2697 feet. Orson Vail 1, CNW NE 23-56n-97w, has a rig.

Ohio Oil Company released location for Mill Iron Cattle Company 3, NE SW SE 19-46n-98w, to be drilled to the Pennsylvania series in Grass Creek field, Hot Springs County, northern Wyoming. Stanolind Oil & Gas Company's Ridgely 26, SE NE 19-46n-98w, Grass Creek, is drilling plug with cable tools. The 5⅝-inch production string is set in the Embar at 3913 feet.

Lance Creek Well Due

Ohio Oil Company's Agnes Rohlff 3, SW SE NE 32-35n-65w, northeast outpost well, Lance Creek field, Niobrara County, eastern Wyoming, is nearing completion at 3789 feet after coring the top of the third Sundance sand at 3868 feet, which is 18 feet lower than Carrie Putnam 4, which completed for 3278 barrels of oil and 3,500,000 cubic feet of gas daily. Cement has been set around the 7-inch production casing in the top of the lower sand.

Ohio Oil Company's Converse Sheep Company 5, CSE SE 32-36n-65w, at last report had cored into the top of the third Sundance at 3493 feet. It is understood, but not confirmed, that this, the highest structural well yet drilled on Lance Creek, will be carried

MOUNTAIN STATES

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
MONTANA		
CUT BANK FIELD (Glacier County)—		
Nadeau Bros., Tribal 1, nw nw 6-32n-5w	120	3015
Santa Rita Oil & Gas Co., Corey 1, nw sw 5-32n-5w	50	2965
Montana Power Gas Co., Coburn 2, nw ne 8-33n-5w	50	2818
Eisler 1, ne sw se 5-33n-5w	*	2795
WYOMING		
NIOBRARA COUNTY		
(Lance Creek Field)—		
Ohio Oil Co., Elliott 6, cse nw 6-35n-65w	2760	3942
NEW MEXICO		
LEA COUNTY (Cooper Field)—		
Gen'l Crude Oil Co.-Magnolia, State 1-F, c sw sw 2-24s-36e	200	3624
LEA COUNTY (South Eunice Field)—		
Skelly, A. L. King 1, c se nw 4-23s-37e	142	3683
LEA COUNTY (Eunice Field)—		
Conoco & California Co., A. E. Meyer 6-B-4, c lot 14, 4-21s-36e	1500	3866
A. E. Meyer 7-B-4, c nw se 4-21s-36e	3000	3873
A. E. Meyer 8-B-4, c lot 16, 4-21s-36e	3000	3852
Devonian Oil Co., State-Heasley 3, c lot 1, 5-21s-36e	1500	2959
Gulf, State-Arnott-Ramsey 5-C, c se sw 21-21s-36e	693	3890
Tide Water, State 1-E, c ne se 16-21s-36e	1500	3886
LEA COUNTY (Hobbs Field)—		
Gulf, W. D. Grimes 4-N, c sw¼ 21-18s-38e	8811	4223
LEA COUNTY (Monument Field)—		
Amerada, C. H. Weir 1-A, c nw sw 25-19s-36e	125	4001
C. H. Weir 4, c se nw 35-19s-36e	2500	3945
Gulf, State Graham 2-C, c nw ne 24-19s-36e	105	4060
Conoco-California Co., J. L. Reed 1-A-3, c ne ne 3-20s-36e	1000	3896
Texas Co., State 1-G, c se sw 19-19s-37e	5000	3890

*Failures; †Junked; ¶Million cu. ft. gas.

to the Pennsylvanian series to test the Minnelusa (Tensleep) for oil production.

Argo Oil Company's Elliott 7, CNE SW 5-36n-65w, Lance Creek, is drilling at 3454 feet and preparing to core ahead for the third Sundance sand. Continental Oil Company's Otto Rohlff 6, CSW SW 32-36n-65w, is drilling at 781 feet, and Joss 4, CSW NE 6-35n-65w, is rigging up rotary.

After encountering crooked hole troubles in the steep dip Quealy Dome light oil structure, Albany County, The California Company has plugged back and is redrilling at 2876 feet in Holst 3, NW SW SE 13-17n-77w. Wilson 1, NW SW SW 18-17n-77w, is resuming with rotary at 1010 feet.

On Big Medicine Bow Dome, Carbon County, Ohio Oil Company and The California Company's Union Pacific-California 2, CNE NE 35-21n-70w, is drilling at 2636 feet. Union Pacific-Johnson 3, CNE SE 23-21n-79w, is drilling at 671 feet with the 12½-inch casing set at 528 feet.

Ohio Oil Company has announced the deepening of another old Dakota producer, Diamond Cattle Company 7, N½ 35-27n-78w, Rock River field, Carbon County. The company's Harrison-Cooper 9, SWc 35-20n-78w, is drilling at 3421 feet, and Alvy Dixon 1, NEc SE 34-20n-78w, has cemented old junk in the hole preparatory to deepening to the Dundance from 2934 feet.

DEEP SAND FOUND

Baker-Glendive field test shows 30 barrels hourly

Baker, Mont.—Drill stem test open one hour at 6743-93 feet in the Dakota-Montana Utilities Company's Unit 1, NE NW 17-4n-62e, deep well to untested horizon underlying the Baker-Glendive gas field of Fallon County, eastern Montana, showed 30 barrels of black oil per hour.

Oil and mud rose 4500 feet in drill stem through quarter-inch choke on tester seated on top of the 50-foot saturation in the Madison lime. The well, the second deepest in Montana, was cored almost continuously to its total depth of 6793 feet. Dakota series and Sundance showed water. Well is shut down for orders, and may be acidized.

The strike is regarded as highly important, as it points to the opening of a huge black oil reserve for Montana, which has only one black oil producing field, Pondera, in Pondera County. Three Montana refineries, with a combined capacity of 4,750,000 barrels per year, operated at 46 percent capacity last year, consuming 2,175,000 barrels of asphalt crude, all imported from Wyoming.

Heretofore only gas has been developed at Baker-Glendive and in the Judith River formation at 900 feet. Baker-Glendive is one of the largest structures in the world. With a length of 96 miles and average width of 6 miles, the structure extends from Hardin County, South Dakota, northwest through Fallon and into Dawson counties, Montana. The Dakota-Montana Utilities Company is a subsidiary of the Minnesota Northern Power Company.

As production is developed in the lime, possibility of considerably boosting output is seen through the use of acid.

Kevin-Sunburst Active

Drilling operations are in full swing in the Kevin-Sunburst field, with 10 wells active. An area in the field that has heretofore had only a showing of oil appears to be good for commercial production as Mitchener-Carscallen's Kruger 1, center west line SE NE 10-34n-2w, after acid treatment showed 1000 barrels of oil standing in the hole. This well is southeast of the Corey-Queen City group.

Only an average oil well completion and four new locations were reported in the Cut Bank field, Glacier County, northern Montana, this week. Santa Rita Oil & Gas Company's Tribal 7, SW SE NE 16-35n-6w, is making better than 100 barrels on the pump at 2949 feet in the Cut Bank formation. Well is a north offset to the Santa Rita Oil & Gas Company's Landers 1, Sunburst producer. Hannah-Peter released location in the center of Lot 3 of 6-32n-5w and Kately-Drumheller et al spotted Ward 3, SW SE SE 10-34n-6w, which is standing cemented at 572 feet. The Texas Company is rigging up rotary for Tribal 2, Lot 1, 6-32n-5w, and the Montana Power Gas Company's Corrigeux 2, CNE NW 28-33n-5w, is building rig.

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Saturated Sand

CORED IN SHELL WILDCAT NEAR ELK HILLS FIELD

WEEKLY STAFF REPORT

Los Angeles.—Shell Oil Company's K. C. L. 1, Section 29-30s-26e, has been cored to 7892 feet in fine well saturated oil sand. Top of the oil sand was encountered at 7834 feet, giving the well 58 feet of zone. The hole is being reamed and the company will either conduct a formation test or cement casing. Location is between the Elk Hills and Fruitvale fields, 8 miles south of Rio Bravo.

Four miles north of the above test, Ohio Oil Company's D-1, Section 1-30s-25e, drilled to 5758 feet and was listed for abandonment this week. It will now be carried on to a greater depth for a more complete test of the lower formation. It is understood that Ohio Oil Company's test was checking higher than Shell Oil Company's.

Seismograph work has been done between Semitropic and Lost Hills, and 6 miles northwest of Semitropic and 4 miles south of Shafter, and in the Buttonwillow and Gossford areas. Because of failure of the Semitropic field to meet the expectations that operators held for it, major leasing did not follow the locations of "highs" established by these seismograph investigations. It is now probable that the play will be reopened and leasing will be revived.

General Petroleum Corporation's Doyle-McKeon 1, wildcat test in Section 5-30s-24e, drilled to 6149 feet and 7-inch casing tested wet after being recemented at 6050 feet. The hole is plugged to 6050 feet and the 7-inch casing has been perforated from 6040 to 5980 feet. Preparations are being made to test this interval.

Three semi-wildcat tests of interest are to be drilled south and east of the Eidson field. R. & R. Development Company and Pioneer Holding Company have locations in Sections 17 and 32, T-30s, R-30e. W. F. Higgins is preparing to drill a test in the SEc Section 17-30s-29e.

Honolulu Oil Corporation's 18-88, Section 18-28s-29e, Round Mountain field in Kern County, was drilled to 1832 feet and cemented 8⅝-inch casing at 1820 feet. On an open hole test, the well was bailed down and came in out of control, estimated 5000 barrels of oil a day along with 10,000,000 cubic feet of gas.

S. & G. Oil Company, Nickel 1, Section 26-29s-27e, extension test of the Fruitvale field in Kern County, was drilled to 3490 feet and 7-inch casing was cemented at 3280 feet, which is the base of the Etchegion formation. The well was completed March 29 for 200 barrels a day of 18.0 gravity oil, cutting 7.0 percent. However, it was impossible to obtain sustained production from this project because of sand trouble. Recently the hole was washed with acid and the well was returned to production April 15 for 490 barrels a day of 18.0 gravity oil, 15 pounds tubing pressure, 850 pounds casing pressure, through a 1-inch choke. This performance will lead to added drilling in this area.

In the Comanche Point area of Kern County, Signal Oil & Gas Company is grading for Tejon 1, a wildcat project, Section 30-32s-30e. This district is returning to prominence as several tests are scheduled to start this spring.

South of Maricopa Flats, Kern County, E. A. Bender's Robinson 1 is located in the center of Section 14-10n-23w. This test is located east of the Rancho San Emidio and will be followed closely by major companies because of large acreage held by several large operators in this area.

Barnsdall Oil Company's 88-9B, Elwood field, Santa Barbara County, was deepened and recompleted April 10 for 1177 barrels a day of 37.7 gravity oil, 265 pounds tubing pressure, 800 pounds casing pressure, through 38/64-inch bean. The hole was bottomed at 3725 (Sespe) with 8⅝-inch casing cemented at 3546 feet and 222 feet of 4¾-inch perforated liner landed at 3724 feet.

Union Oil Company's Adam 1, Section 24-10n-34w, is shut in with 230 pounds tubing pressure, and 625 pounds on the casing. This wildcat well was completed April 1 for 2376 barrels a day of 16.0 gravity oil from 2576 feet.

El Rancho Oil Company's Elkins 1, Section 9-3-19, outside test of the Bardsdale field, Ventura County, is 4041 feet deep with 9-inch casing cemented at 3998 feet. On production test, it was swabbed dry and later the 9-inch casing was perforated with gun perforator and allowed to stand for 24 hours. No fluid entered the hole, and preparations are being made to deepen.

CALIFORNIA
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
KETTLEMAN HILLS—		
Standard, No. 21-19J	650	8780
No. 4-33J	1570	8230
EDISON—		
R. E. Corbett, Rose 3	75	2065
FRUITVALE—		
Gulf, K. C. L. 21	340	3875
KERN FRONT—		
C. C. M. O. Co., No. 59	125	2184
General, Young 5	135	2175
McKITTRICK—		
Franco-Western Oil Co., No. 12	150	2300
MIDWAY-SUNSET—		
Alford Oil Co., No. 4	270	2833
MIDWAY—		
Hugh B. Evans, No. 35-12	140	2318
MOUNTAIN VIEW—		
Hogan Pet. Co., Foster Com. 2	1070	5951
Standard, Warren 1	125	5285
PREMIER—		
Standard, No. 5-8	285	2815
ELWOOD—		
Signal O. & G. Co., Permit 98-No. 6	680	3757
KERN COUNTY—		
John W. Alford, Quinn 1	*	2399
Ohio, No. D-1	*	5758
SANTA BARBARA COUNTY—		
Union, Sudden 1	*	2221
MONTEBELLO—		
Standard, Baldwin 84	115	3040
SEAL BEACH—		
Continental, Bixby 38	450	6538

*Failures; †Junked; ¶Million cu. ft. gas.

Los Angeles County

Shell Oil Company's McKenna 1, wildcat test north of the Torrance field, Los Angeles County, has been drilled to 7352 feet in schist, with 8⅝-inch casing cemented to 4157 feet. The top of the schist was cored at 7235 feet and the top of the conglomerate was encountered at 7200 feet; both horizons were found to be barren. The hole is bridged with cement to 4309 feet and bailing operations are in progress for a test of upper showings. This project had been considered one of the more important wildcats in Southern California. Shell Oil Company has acquired 1200 acres in this area and it is probable that additional deep tests will be drilled by this company.

In the El Segundo district of Los Angeles County, Republic Petroleum Company has drilled its No. 2, Section 18-3s-14w, to 7477 feet. The conglomeratic oil sand was cored at 7407 feet and preparations are being made to cement 7-inch casing at 7350 feet. Success of this well will draw Universal Consolidated and the Richfield Oil Company into the play. In turn, The Texas Company and Ohio Oil Company are obligated to follow.

McVicar-Rood Company is building a rig for Sentous 1, located in Lot 2, Partition of Rancho La Puente, Section 6-2s-9w, 6 miles east of the town of Puente, Los Angeles County, and is the company's initial test of 2000 acres it has recently acquired in this area.

Birch Oil Company has entered into an operating agreement with Wm. Rosecrans and associates, whereby it will drill a test in the E½ Section 17-3s-13w, Los Angeles County. Five hundred acres has been acquired by the Rosencrans interests for this purpose. The property is located between Avalon and Central avenues, north of Rosecrans avenue.

George Terry and associates are rigging rotary for a test to be known as Westminister Gun Club 1, SEc Section 17-5s-11w, Sunset Beach area, Orange County. This location falls approximately 1500 feet north of the old Gieck well which was abandoned at 5955 feet after finding nothing of commercial importance.

South of the town of Gardena, Los Angeles County, A. E. Edington has foundations for a wildcat test to be drilled at 190th and Vermont streets, south and east of Memorial Park. The

operator has acquired 170 acres in leases for this test.

Twenty-five projects are active in the Redondo Beach field, Los Angeles County, with indications of peak activity being reached this summer. Three wells are producing, the best of which is Dumas-Lewis Oil Company's discovery well, averaging 350 barrels a day of 18.0 gravity oil. The Redondo Beach City Council soon will be forced to make a decision as to the official status of this embryo field. If considered an extension of the Torrance field, it will be subjected to town lot drilling. If it is viewed as a new and separate field, the restriction of one well per acre would be applied, provided the council does not legislate to alter this ruling.

Ohio Oil Company's R. G. C. 18, outpost test of the Venice field, Los Angeles County, has been drilled to 6380 feet, with 6⅝-inch casing cemented at 6298 feet, and is being rigged to pump. Swabbing operations for the past several days failed in its purpose to produce a flowing well. Fluid level was lowered to 2000 feet and large quantities of heavy mud were recovered.

Eyer Petroleum Corporation's No. 1, wildcat test east of the Torrance field, Section 20-4s-13w, has been drilled to 3794 feet with 8⅝-inch casing cemented at 3608 feet. Previous attempts to produce this well have failed because of faulty shut-off on 8⅝-inch casing.

MICHIGAN

MICHIGAN WEEKLY STAFF REPORT

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
GRATIOT COUNTY—		
H. L. McMillen's Bishop 1, 10n-4w, c s-n-nw	*	1018
Miller Bros.' Ryan 1, 9n-1w, 22	*	2450
MASON COUNTY—		
Max Prey's Borothy 1, 17n-15w-sw nw nw-29	*	3398
MECOSTA COUNTY—		
Wiser Oil Co.'s Deakins 1, 13n-7w, c sw nw-27	*	1300
Deakins 2, 13n-7w, c ne ne-28	*	1320
Ed. Stewart's Houghton 3, 13n-7w, c sw ne-33	¶20	1315
Ide and Glavin's Secoy 1, 13n-8w, c se ne-25	¶22½	1370
MONTCALM COUNTY—		
Turner Oil Co.'s Daws 1, 12n-7w-c ne nw-15	¶8	1242
J. W. Leonard's Jarfstier 1, 10n-5w, sw sw ne-11	*	3210
Rex Oil Co.'s Strait 1, 10n-5w, nw se ne-2	35	3189
Rowmor Oil Corp.'s Hustead 3, 10n-5w, nw ne sw-2	*	3220
T. F. Caldwell, Inc.'s Davies 1, 10n-5w, ne se ne-9	*	3228
OGEMAW COUNTY—		
Kimmal Oil Co.'s Golf 2, 22n-2e, nw sw sw-20	100	2700
SAGINAW COUNTY—		
Chas. Bell's Wegner 1, 11n-2e, sw sw nw-10	*	3210

*Failures; †Junked; ¶Million cu. ft. gas.

EASTERN FIELDS

EASTERN FIELDS WEEKLY STAFF REPORT

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
OHIO		
ATHENS COUNTY—		
Ohio F. G. Co., Sunday Creek 6083	*	3695
BELMONT COUNTY—		
A. J. West & Co., Perkins 1	*	1522
Mike Hardwicke, Taggart 2	¶	725
ASHLAND COUNTY—		
Ohio Fuel Gas Co., Stine 1	*	2871
COSHOCTON COUNTY—		
Preston Oil Co., Griffin 5	¶	3185
Murphy & Co., Myers & Mossholder 2	¶	3183
WAYNE COUNTY—		
John Harpster, Beighler 1	¶	492
Ohio Salt Co., Ohio Salt Co. 1	¶	492
LORAIN COUNTY—		
Schneider & Wyles, Featherstone 1	¶	2508
Dempsey & Co., Cleveland Stone Co. 1	¶	2525
William Dempsey, J. A. Palmer 1	¶	2634
Walter Kline, Burge 1	¶	982
Ohio Fuel Gas Co., Kabalka 1	¶	2631
HOLMES COUNTY—		
Mehowa Oil & Gas, Schaffer 1	¶	870
STARK COUNTY—		
East Ohio Gas Co., Belden 2	*	4489
Ohio Fuel Gas Co., Walter 1	*	4140
Brendel Prod. Co., Jones 1	*	4597
White & Lyons, Daugherty 1	¶	4502
East Ohio Gas Co., Mitchell 1	¶	4280
Wittmer Co., Rohr 1	*	
GUERNSEY COUNTY—		
Geo. Jewell & Co., Carlisle 1	¶	1000
D. T. Orndorff, Jones 1	*	1174
FAIRFIELD COUNTY—		
City Natural Gas Works, Stalder 1	¶	2469
MEDINA COUNTY—		
Litchfield O. & Dev. Co., Hopler 1	2	353
Hopler 1	1	
E. R. Edson Son Co., Miller 74	3	500
Oko Oil & Gas Co., Essig 71	*	380
Sanford & Co. 44	2	
Preston Oil Co., Walker 1	1	
SANDUSKY COUNTY—		
C. Breckenheisen, Fee 2	5	1260
WASHINGTON COUNTY—		
J. C. Harlan, Docker 3	¶	1705
T. J. Hamilton, Payton 2	¶	1765
Stewart & Elliott, Heslop 12	¶	910
Harry Binegar, Moore 6	*	1967
HOCKING COUNTY—		
Ohio Fuel Gas Co., Naramore 1	*	2440
Murray City O&G, Acker 11	3	
PIKE COUNTY—		
Dove Oil & Gas Co., McGuire 1	¶	
KNOX COUNTY—		
J. B. Reed & Co., Dial 1	*	
Sterl Brown, Rine 2	4	738
INDIANA		
DECATUR COUNTY—		
Hoosier Public Utilities, Lanham & Co. 1	5	
DUBOIS COUNTY—		
Claud Noble, Neukan 1	*	
GIBSON COUNTY—		
Gib Van Oil Co., Haskins 5	*	
Mid West Dev. Corp., Harper 1	100	
HANCOCK COUNTY—		
J. Harve Snyder, Messena 1	¶	
PIKE COUNTY—		
Indiana S. W. Gas Corp., Gross 1	¶	
Reid, Parson & Havens, Robling & Co. 1	¶	
Dilly & Miller, Morrison 2	60	1131
SPENCER COUNTY—		
T. F. Seitz, Lorch 6	10	
SULLIVAN COUNTY—		
Lord & Glegary Oil Co., Squires 1	*	812
Nelson Bros., Blakeman 1	*	1067
VANDERBURG COUNTY—		
George H. Ranos, Culbertson 1	50	1250
Nelson & Co., Kern 1	*	
WEST VIRGINIA		
KANAWHA COUNTY—		
Godfrey L. Cabot, Inc., Tompkins 1	¶	5097
CLAY COUNTY—		
Virginian G&O Co., Brown, Swan & Co. 32	2	1919
Brown, Swan & Co., 33	4	2035
WIRT COUNTY—		
J. J. Shore, Mayle 1	10	452
Glen W. Roberts, Mills 1	10	1985
LEWIS COUNTY—		
Hope Const. & Refg. Co., Rohrbough 1648	*	2887

*Failures; †Junked; ¶Million cu. ft. gas.

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THE OIL WEEKLY REPORT ON IMPORTANT *Wildcat Tests*

ALABAMA

HOUSTON COUNTY — Rice O&G Co.'s Oakley Est. 2, nw sw 9-3n-29e, dr 2805 ft.

ARKANSAS

CALHOUN COUNTY—Ben Barnett's Freeman Smith 1, se nw sw 36-15-14, 10-in csg 634 ft, dr 710 ft.

COLUMBIA COUNTY—J. C. Buckbee, Tr.'s J. B. Wilson 1, sw ne 17-17-18, dk and mir.

CRAWFORD COUNTY — Trumbo et al's Craddock 1, c nw ne 3-11-30, dr 810 ft.

DALLAS COUNTY—Kel-Mac Land & Roy. Co.'s Owen 2, nw sw 28-10-16, logged sw sand, sd 1580 ft.

HEMPSTEAD COUNTY—Easton & May's Conway 1, ne sw 20-12s-27w, arr deepen 80 ft. F. W. Martin & M. D. K. Fitzwater's Lafferty 2, se nw 17-14-24, 7-in csg 1980 ft, sd 2148 ft.

LA FAYETTE COUNTY—Erwin & Leach's Bodcaw 3, nw nw 20-16-23, elev 250 ft, dr 6102 ft hd lime. Joe Modisett et al's Frost Lbr. Co. 1, 29-19-24, elev 261 ft, dr plug, 7-in csg cemtd 5310 ft, td 5315 ft.

LONOKE COUNTY—Frank F. Silver's Jos. Chambers Est. 1, sw ne nw 17-2-7, mim.

MILLER COUNTY—Odell Hinson's Montana Realty Co. 1, 3-17-28, woc 238 ft. C. V. Lenz's Dale 7, ne sw 24-15-26, so ds test 2838-40 ft, cored sand so 2855-56 ft, arr ds test. W. F. Turner's Fee 1, 8-20-27, lcn abn; Fee B-1, 8-20-27, lcn abn.

NEVADA COUNTY—Duncan & Staley's Munn 1, 28-14-22, spd cmtd 15½ in surf cas, sd 300 ft for heavier rig.

OUACHITA COUNTY—Phillips Pet. Co.'s J. D. Reynolds 1, se nw 27-15-15, elev 178 ft, 9⅝ in csg 4892 ft, tested 12 mil ft gas and 10 bbls 61 grav distillate per hr thru half-in tub choke, si, td 4909 ft. O. F. Whittaker's Howard 1, nw ne 20-12-16, rur.

UNION COUNTY—J. C. Buckbee, Tr.'s Ezzell 2, ne nw 13-17-15, rur. Mrs. Mamie McCurry et al's Slaughter 1, se se 9-17-16, top red beds 2985 ft, dr 3012 ft shale. Root Pet. Co.'s White 1, se sw 36-17-15, elev 257 ft, top Nacatosh 2141 ft, cored sw sand 3463-72 ft, sd.

CALIFORNIA

FRESNO COUNTY

COALINGA—Jas. M. Conlon Co.'s No. 1, 30-19-15, td 889 ft, co.

MONOCLINE RIDGE — Seaboard Oil Corp.'s Welsh 1, 10-16-13, dr shale and sand 3555 ft.

CURRY MOUNTAIN—Standard's So. Coalinga 1, 36-21-14, wocs 16 in. at 515 ft, bottom.

CANTUA CREEK—Gulf's S. P. Land 3, 3-17-15, dr nhale 1240 ft.

KERN COUNTY

DELANO—John W. Alford's Quinn 1, 14-25-27, abn 2399 ft.

SO. MARICOPA — American Pacific Oil Co.'s No. 1, 18-10-23, rig. E. A. Bender's No. 1, 14-10-23, dr.

McKITTRICK—Belmac Drlg. Co.'s Douglas 1, 22-29-21, td 4800 ft, fsh.

DEVIL'S DEN—Cumberland Oil Co.'s Mabry 2, 17-26-18, td 4729 ft, running formation tester. Richfield Oil Co.'s Alferitz 2, rur.

McVAN—Framac Oil Co.'s Brown 2, 22-27-27, td 1413 ft. Running 6⅝ in to 1388 ft.

SO. BUTTONWILLOW—General's Doyle-McKeon 1, 5-30-24, td 6149 ft, plug 6050 ft, to retest.

NO. MOUNT POSO—H. Mann's No. 2, 27-26-28, td 1537 ft, plug 1443 ft, to test.

MOUNTAIN VIEW — Mohawl Oil Co.'s Earl Fruit 1, 10-31-29, foundation.

BUENA VISTA LAKE—Ohio's No. A-6, 32-31-26, td 4676 ft, wocs 8⅝ in at 4552 ft, showing gas; No. A7, 5-32-26, lcn.

GRAPEVINE—Ohio's Title Ins. 1, 36-11-19, lcn. Reserve Oil & Gas Co.'s No. 1, 33-11-19, td 6030 ft, swabbing water and heads gas.

MOUNT POSO—Poso Pet. Co.'s No. 1, 2-27-27, sd 1427 ft.

ROUND MOUNTAIN—Piute Holding Co.'s Piute 1, 17-28-29, lcn.

NO. MOUNT POSO—Santa Carla Oil Co.'s Glide 1, 7-27-28, td 1800 ft, co.

STEVENS AREA—Shell's K.C.L. 1, 29-30-27, dr sand and shale 7887 ft.

COMANCHE POINT—Signal O&G Co.'s Tejon 1, 30-32-30, grade. Tejon Ridge Oil Co.'s No. 1, 23-32-29, td 2350 ft, co.

WHEELER RIDGE — Silver Gate Co.'s Tejon 1, 7-10-19, sd 2985 ft.

LOST HILLS—Standard's United 1, 2-26-20, td 6314 ft, redr. 6137 ft.

BUENA VISTA—Superior Oil Co.'s B.V.A. 1, 6-32-25, td 4880 ft, plug 1000 ft, redr at 1400 ft.

POSO CREEK—Milton J. Unger's No. 1, 27-26-28, dr gray sand 1350 ft.

McFARLAND—Woods & Bailer's No. 1, 16-26-26, sd 3375 ft.

HUMBOLDT COUNTY

EUREKA — Texas Co.'s Eureka 2, 22-3-1, td 4357 ft, fsh.

KINGS COUNTY

PYRAMID HILLS—Associated's Avenal 1, 35-23-17, foundation.

TULARE LAKE—Hancock-Union's Giannini 1, 28-22-20, dr sand and shale 5048 ft.

SAN JOAQUIN COUNTY

TRACY—Amerada's F.D.L. 5, 15-2-5, td 6160 ft, plug 4025 ft, tested, showed gas, shut in.

STOCKTON—Holly Dev. Co.'s Padden 1, 16-2-5, rur. Standard Oil Co.'s McDonald 1, 25-2-4, td 4210 ft, ran formation tester, blew gas.

SAN LUIS OBISPO COUNTY

CARRIZO PLAINS—Barnsdall's Wreden 1, 24-28-17, dr sand and shale 1931 ft.

ARROYO GRANDE—Pismo Pet. Co.'s Scott 1, 5-32-13, dr sandy shale 2650 ft.

ELK HORN—United Oil Co.'s No. 1, 2-32-21, td 150 ft, wocs 16 in at 135 ft.

CHOLAME—Willett Oil Assn.'s Jack 2, 10-25-15, sd 3648 ft.

SOLANO COUNTY

RIO VISTA—Amerada's Emigh 1, 26-4-2, rur.

TEHAMA COUNTY

CORNING—Northern Counties Pet. Co.'s Ewers-Mooney 1, 25-24-3, td 7010 ft, rep. equip.

MONTEREY COUNTY

WEST PLEYTO—Shell's Branch 1, 34-24-10, dr sand and shale 7922 ft.

SANTA BARBARA COUNTY

SUMMERLAND—Toney Carnero's Fithian 1, 8-4-24, dr hard sand streaks shale 600 ft.

SANTA MARIA—Hall-Baker's Preisker 1, 12-9-34, dr shale 1600 ft. Union Oil Co.'s Adam 1, 24-10-34, td 2576 ft, shut in 230 pounds on tubing and 625 pounds on casing; Enos 19-1, 19-10-33, grade.

LOMPOC—Lompoc Pet. Co.'s Beauterbough 2, 18-7-24, td 3490 ft, fsh. York Oil Co.'s No. 3, 33-8-34, rur.

CARPENTERIA—Santa Barbara Oil & Gas Co.'s Bryce 1, 29-4-25, sd 3000 ft.

POINT CONCEPTION—Union's Sudden 1. 15-5-25, td 2221 ft, abn.

VENTURA COUNTY

SHIELLS CANYON — Bankline Oil Co.'s Calumet B-1, 3-3-19, dr sand and shale 4133 ft. Petroleum Securities Co.'s Home Ro. 3, 3-3-19, dr sand and shale 1942 ft. Texas Co.'s Shiells 129, 4-3-19, td 4812 ft, plug 4260 ft.

SO. MOUNTAIN—Calco Pet. Corp.'s Calco 3, 17-3-20, dr shale streaks oil sand 3100 ft.

OJAI—Continental's Pirie 2, 12-4-23, td 1017 ft, pulled tubing to deepen.

BARDSDALE—El Rancho Oil Co.'s Elkins 1, 9-3-19, td 4041 ft, washed with acid, perforated, bailed, small amount oil.

OXNARD—General's McGrath 2, 26-2-23, dr sand and shale 5488 ft.

SANTA PAULA — High Mesa Oil Co.'s Butcher 1, 16-4-22, td 650 ft, co.

SIMI—Jas. S. Hull's No. 1, 2-2-18, dr hard sand 1713 ft.

PIRU—R. P. Johnson's Rubel 1, 21-4-18, dr sand shale 1640 ft.

BARDSDALE—Laing & Jacobs' No. 1, td 1225 ft, rep. mach.

SESPE CANYON — Merchants Pet. Co.'s No. 1, 1-4-20, grade.

SANTA PAULA—Rennie Bros. No. 1, 21-4-21, td 450 ft, rur.

SESPE CREEK—Speik Oil Co.'s No. 1, 33-5-19, rur.

BARDSDALE—Union's Dryden 10, 12-3-20, td 6055 ft, swabbing, showing water and oil.

SOUTHERN CALIFORNIA

PUENTE—Chas. R. Butler's Butler 1, 14-2-10, td 4145 ft, in diabase with streaks shale, sd.

NO. LONG BEACH—Geo. L. Clayton's No. 1, 31-3-12, td 6765 ft, bailing.

TORRANCE—Codri Oil Co.'s No. 1, 28-4-13, dr tar sand 3296 ft. Eyer Pet. Corp.'s No. 1, 20-4-13, td 3794 ft, to test on pump.

ARTESIA—Davis & Lewis No. 1, 25-3-12, rig.

GARDENA—A. C. Edington's No. 1, foundation.

WILMINGTON—General's No. 1, foundation. Sovereign Oil Corp.'s Banning 1, 8-4-13, td 3663 ft, plug 3535 ft, to test water shutoff.

PUENTE—McVicar-Roods' Sentous 1, 6-2-9, rig.

TOPANGA CANYON—Monarch Pet. Co.'s No. 1, 5-1-16, td 650 ft, co.

WEST LONG BEACH—Shell's Amebco 1, 13-4-13, dr gray sand 6335 ft.

EL NIDO—Shell's McKenna 1, 33-3-14, td 7352 ft, bridge at 4308 ft.

DOMINGUEZ—West American Oil Co.'s Del Amo 1, 3-4-13, dr hard shale 8077 ft.

NEWHALL—Yant Pet. Corp.'s No. 5, 1-3-16, dr shale streaks oil sand 2003 ft.

NEWPORT—Commander Oil Co.'s Mesa 1, 29-6-10, dr brown shale 1734 ft.

YORBA LINDA—Continental's Carlton Com. 1, 21-3-9, td 4796 ft, ran liner, bailed wet, to test by stages.

WESTMINSTER — Hillman-Long's No. 1, 14-5-11, dr sand and shale 6934 ft.

SUNSET BEACH—Geo. Terry's Gun Club 1, 17-5-11, rur.

RIVERSIDE COUNTY—Fred E. Stevens' No. 1, 27-3-7, rigged up.

SAN BERNARDINO COUNTY — Albert Pet. Co.'s Chute 1, 14-4-1, rur. Equitable Pet. Explor. Co.'s No. 1, 11-10-5, td 2252 ft, plug 2000 ft, to redr.

ABBREVIATIONS

The following abbreviations, signs, etc., are used in completions and wildcat reports in THE OIL WEEKLY.

*—*dry hole abandoned well.*
‡—*salt water (completions).*
†—*junked and abandoned.*
¶—*million feet of gas.*
abd—*abandoned.*
bbls—*barrels.*
br—*building rig.*
b.s.—*basic sediment.*
csg—*casing.*
co—*cleaning out.*
dd—*drilling deeper.*
dk—*derrick.*
dr—*drilling.*
fsg.—*fishing.*
tt—*feet.*
hfw—*hole full of water.*
in—*inches.*
lcn—*location.*
m—*milling.*
mim—*moving in materials.*
mit—*moving in tools.*
mot—*milling on tools.*
n, s, e, w—*north, south, east, west.*
oih—*oil in hole.*
owdd—*old well drilling deeper.*
owpb—*old well plugging back.*
pb—*plugged back or plugging back.*
r—*reaming.*
rog—*rig on the ground.*
rur—*rigging up rotary tools.*
rust—*rigging up standard tools.*
sd—*shut down.*
sdtr—*sidetracking.*
sg—*show gas.*
si—*shut in.*
so—*show oil.*
so & g—*show oil and gas.*
spd—*spudding.*
sr—*straight reaming.*
sw—*salt water.*
td—*total depth.*
ur—*underreaming.*
wih—*water in the hole.*
wo—*workover.*
wocs—*waiting on cement to set.*
wosr—*waiting on standard rig.*

COLORADO

ADAMS COUNTY—Hills Dome Oil Lease Hills 1, csl se se 27-3s-64w, dr 4153 ft.

CHEYENNE COUNTY — Stanley Brittall, Inc., Sipe 1, cne sw 26-12s-48w, spd and sd.

HUERFANO COUNTY—Collins & Quinn, Fee 1, cnl nw se 4-28e-68w, sd 3810 ft, suspended.

LAS ANIMAS COUNTY—Mountain States Gasoline Corporation, Nikola 1, cne¼ se 10-34n-62w, sd 1773 ft, suspended.

MORGAN COUNTY—Swisher et al, Lunt 1, sw sw sw 3-5n-60w, hole full water, sd, td 1449 ft.

WASHINGTON COUNTY—Indian Territory Oil Co.-Foster Min. Corporation Vance 1, cne ne 28-1s-49w, mir.

YUMA COUNTY—Indian Territory Oil Co., Strangways 1, cnw sw 21-2s-43w, mir.

FLORIDA

HILLSBOROUGH COUNTY — Southern Pet. Co.'s Mizell & Williams 2, se ne 4-32s-21e, dr 1068 ft.

JACKSON COUNTY — Mrs. Mamie Hammonds et al's Grandberry 1, sw ne 15-5n-9w, sd 240 ft.

LAKE COUNTY—Oil Dev. Co. of Fla.'s Gulf Expl. Co. 1, se se 17-24s-25e, coring 3415 ft, gray lime and anhydrite. Union Oil & Ref. Co.'s Gulf Expl. Co. 1, se sw 17-24s-25e, fsh 800 ft.

NASSUA COUNTY—J. Eugene Brown et al's Bank of Hilliard 1, 8-3n-24e, dk.

KANSAS

BARTON COUNTY—Morgan & Flynn et al's Zimmer 1, se se sw 30-19s-14w, co 3110 ft. Hilligoss et al's Schmidt 1, ne ne ne 27-19s-11w, td 3490 ft, D & A. Simpson, Noble & Atlantic's Niss 1, cnw ne 31-20s-13w, set 8-in csg 3277 ft, rust. Murphy & Morgan's Robinson 1, ne ne sw 21-16s-14w, dr 3000 ft. Hinkle's Smith 1, sw nw nw 1-17s-11w, running 6-in csg 3250 ft. Merriam's Soaken 1, sw sw se 21-17s-11w, sd 2470 ft. Davison et al's Birzer 1, sw se sw 22-17s-12w, ur 12-in csg 660 ft. Ramsey et al's Hunt 1, nw nw nw 10-18s-11w, ur 6-in csg 3393 ft. Schermerhorn Oil Co.'s Hunter 1, ne ne ne 29-18s-15w, dr 1650 ft. Buchanan & Alexander's Langford 1, ne ne sw 14-20s-11w, dr 2915 ft. Wakefield & Johnson's Bumm 1, sw ne ne 22-19s-12w, to skid rig. Rose & Lant's Redetzke 1, ne nw nw 10-16s-11w, mim. Price et al's Ehrlich 1, nw nw se 10-16s-13w, otd 3361 ft, dr 3420 ft.

BUTLER COUNTY—Ellis et al's Pettit 1-A, se se nw 21-28s-6e, ru. Sanford et al's Weaver 1, se se ne 11-28s-5e, ru.

COWLEY COUNTY—Penwest's Clover 1, ne se se 8-31s-7e, pb 1490 ft to cement 5-in csg at 1410. Roth & Faurot's Guthrie 1, se ne nw 30-33s-8e, dr ahead. Mead Bros. et al's Orr 1, se se sw 23-31s-4e, dr 2980 ft. Mickleson et al's Wallace 1, sw se se 10-33s-4e, sd 35 ft. Wakefield's Wilson 1, nw nw nw 4-32s-3e, td 3403 ft, D & A. De Genther Oil Co.'s Holt 1, nw nw se 15-30s-5e, mim. Trees Oil Co.'s Simpson 1, cne nw 3-30s-4e, lcn.

EDWARDS COUNTY — Stanolind-Elwell's Donovan 1, cse se 14-25s-18w, rur.

ELLIS COUNTY—Jones Bros. & Carpenter et al's Solomon 1, se se sw 28-11s-19w, dr 1231 ft. Twin Drlg. Co.'s Reidel 1, sw sw ne 27-13s-16w, dr 3237 ft. Brunson & Ewers-Simpson's Gross 1, ne ne sw 29-14s-17w, fsg 1130 ft. Bridgeport Mach. & J. J. Hall's Madden Estate 1, ne nw nw 26-15s-18w, dr 530 ft. Lario O. & G. Co.'s Walter 1, se ne sw 2-12s-18w, dr 2005 ft. Tom Palmer's Schoenthaler 1, ne ne nw 31-12s-19w, ru. Harris & Haun et al's Schmeidler 1, se se sw 3-13s-17w, ru. Yarnell & Carlson's Phillip 1, nw nw se 2-14s-18w, spd. Muth et al's Penney 1, sw sw se 29-14s-18w, mim. Twin Drlg. et al's Copeland 1, ne ne sw 26-14s-19w, rig. Empire's Dreher 1, ne ne ne 27-15s-19w, cellar.

ELLSWORTH COUNTY — Skiles et al's Kafka 1 ne ne sw 15-17s-8w, dr 3055 ft. Empire O. & R. Co. et al's Kroesch 1, nw nw se 33-17s-9w, dr 2450 ft.

FINNEY COUNTY—Lone Star State Drlg. Co.'s Hamlin 1, sw sw ne 31-24s-34w, rur.

GREENWOOD COUNTY—Dunn's Dawson 1, cnw ne 27-26s-13e, td 1527 ft, pb 1200 ft. McGinnis' Dater 1, nw nw sw 11-24s-8e, rig. McGinnis' Lampe 1, nw ne sw 26-24s-8e, rig.

HARPER COUNTY—Marathon Oil Co.'s Zellers 1, csw nw 17-35s-8w, fsg 5410 ft.

HARVEY COUNTY—Empire O. & R. Co.'s Webster 1, se se sw 8-24s-2w, td 3425 ft, D & A. Harburney Oil Co.'s Scrag 1, nw nw se 24-22s-3w, fsg 2605 ft. Western Kansas Co.'s Warkentin 1, csw sw 1-23s-2w, td 3000 ft, est 200 bbls oil.

McPHERSON COUNTY—Empire's Cunningham 1, se se se 26-18s-1w, dr 579 ft.

NESS COUNTY — Continental Oil Co.'s Thompson 1, ce½ e½ sw 13-18s-26w, dr 2100 ft.

RENO COUNTY—McPherson Oil Co. et al's Miller 1, se se ne 23-24s-5w, co 3580 ft. Helmerich & Payne's Schwaiger 1, sw se ne 27-26s-5w, fsg 3800 ft. Dickey Oil Co.'s Shepherd 1-A, ne ne nw 22-26s-9w, sso 4139-4142 ft. Cheney et al's Moore 1, ne ne ne 14-26s-8w, rur. Foraker et al's Hiett 1, se sw ne 34-24s-4w, dr 2758 ft.

RICE COUNTY—Gratton et al's Williams 1, sw sw nw 17-18s-7w, co 3116 ft. Continental & Empire's Nikkel 1, ne sw sw 13-18s-8w, td 3216 ft, pot 1428 bbls oil, comp. Aylward et al's Oberle 1, se se sw 19-18s-10w, td 3402 ft, D & A. Gilmax Oil Co.'s Sargent 1, se se se 31-18s-6w, dr 200 ft. Dickey Oil & Continental Oil Co.'s Newkirk 1, ne ne sw 11-18s-7w, set 10-in csg 184 ft, wocs. Witt's Hall 1, se se nw 3-20s-9w, dr 2550 ft. Duwe & Schneider's Wright 1, ne ne ne 36-21s-7w, dr 2530 ft. Simpson & Noble et al's Pulliam 1, cs½ n½ ne 35-19s-8w, rig. Skiles et al's Stout 1, se se se 6-21s-9w, br. Beardmore et al's Fuller 1, sw sw se 23-18s-7w, ru. Sage et al's Patton 1, sw sw sw 5-21s-7w, cellar. Permian Oil Co.'s Monroe 1, cne ne 9-20s-7w, dr 2465 ft.

ROOKS COUNTY—Murfin et al's Washusin 1, ne ne se 12-6s-18w, ur 10-in csg 2288 ft. Pryor & Lockhart's Bradley 1, sw sw ne 31-10s-16w, td 3701 ft, D & A. Skaer Oil Corp. & Reese's Dryden 1, ne ne ne 28-10s-17w, dr 515 ft. Lester & Dean's Burtt 1, se se ne 29-10s-20w, dr 700 ft. Hartman & Blair et al's Hall 1, nw nw nw 25-10s-17w, br.

RUSH COUNTY—Pryor & Lockhart's Stegman 1, sw nw ne 11-16s-17w, rig. Keith et al's Dartmouth Savings Bank 1, sw sw ne 3-17s-18w, td 3346 ft, rust. Rose Spring et al's Jacobs 1, sw se nw 8-16s-17w, sd 2825 ft. Boyle & Grossman's Wilson 1, ne ne ne 33-17s-19w, sd 415 ft. National Ref. Co.'s Werth 1, nw ne ne 7-16s-18w, dr 1975 ft.

RUSSELL COUNTY—Bridgeport Mach. & Lauck's Wycoff 1, se nw ne 27-11s-13w, dr 3456 ft. Berry et al's Cook 1, ne ne se 19-11s-13w, co 2540 ft. Eisenhour & Shaffer's Humes 1, sw sw sw 6-14s-12w, co 2435 ft. Darby Pet. & Continental Oil Co.'s Letsch 1, se ne nw 34-14s-13w, dr 2625 ft. Central Pet. Co.'s Furthmeyer 1, ne ne ne 28-14s-15w, dr 1560 ft. Stearns & Streeter et al's John Hancock Insurance 1, se sw sw 31-12s-14w, dr 590 ft. Wakefield et al's Krug 1, ne nw sw 7-15s-14w, rig. Coralena Oil Co.'s G. M. Sellens 1, sw se sw 20-15s-13w, rig. Sam Murphy et al's Enschutz 1, sw sw sw 10-15s-13w, dr plug, 2700 ft oih in 18 hrs, pot 230 bbls oil.

SEDGWICK COUNTY—Dickey Oil Co.'s Ayers 1, sw sw nw 12-27s-2e, dr 1260 ft.

STRATFORD COUNTY—Farris et al's Snyder 1, se se nw 3-21s-11w, td 3111 ft, 1000 gals acid, pot 390 bbls oil, comp. Kessler & Their's Evens 1, ne ne ne 30-21s-11w, td 3677 ft, D & A. Lario O. & G. Co. et al's Andress 1, cnw ne 1-21s-15w, dr 3377 ft. Stanolind-Atlantic's Shotton 1, sw sw sw 27-22s-13w, dr 780 ft.

SUMNER COUNTY—Helmerich & Payne et al's Elwell 1, nw nw ne 18-34s-1e, dr 3935 ft. Wilcox O. & G. et al's Hess 1, se se nw 13-23s-2w, dr 2923 ft. Matthews & Derrington's Berry 1, nw nw se 14-35s-1e, dr 1805 ft. Wilson et al's Clark 1, csl nw 15-35s-1w, dr 3700 ft. Craft & Wilson's Nevitt 1, ne nw ne 36-32s-2e, running 10-in csg 1879 ft. Pryor & Lockhart et al's Knowles 1, sw sw sw 30-30s-1e, rur. The Texas Co.'s Reed 1, ne se se 11-31s-1w, rig.

TREGO COUNTY—Continental Oil Co.'s Holcomb 1, ne se nw 26-11s-23w, td 3654 ft, 4000 gals acid, pumped 439 bbls oil in 23 hrs. Central Commercial's Wagg 1, nw nw se 17-13s-21w, td 3908 ft, 1000 gals acid, no test. Hall et al's Deines 1, se se se 12-13s-24w, mim.

WOODSON COUNTY—Max Reynolds' Guy 1, ne ne se 29-25s-14e, sd 1450 ft. Sheedy's Baker 1, se se nw 2-26s-14e, dr 1527 ft. Mendenhall et al's Hunter 1, ne ne ne 36-25s-14e, mi mach.

SOUTH LOUISIANA

ACADIA PARISH—Magnolia's Homeseekers 1, Esterwood prospect, sec 54-10s-1w, dr shale 2482 ft.

ALLEN PARISH—Humble's J. A. Bel 1, Reeves prospect, sec 28-6s-7w, dr shale 3622 ft.

AVOYELLES PARISH—Frost Oil Co.'s Hinds Lbr. Co. 1, sec 3-3n-4e, dk.

CAMERON PARISH—Magnolia's Hebert 1, Big Lake, sec 13-12s-9e, dr shale 2000 ft.

IBERIA PARISH—Jefferson Lake Oil Co.'s Lake Pigneur 274, Jefferson Island Dome, 12s-5e, sd 8183 ft.

JEFFERSON DAVIS PARISH—Shell's Lacassine 1, Hayes prospect, sec 20-11s-5w, dr hard sand 8648 ft.

LIVINGSTON PARISH—Bunte Oil & Gas Co.'s F. L. Davis 1, Denham Springs area, sec 7-7s-3e, dk.

ST. JAMES PARISH—Shell's Colonial Sugar 1, Convent prospect, sec 5-12s-5e, dr shale 6517 ft.

ST. MARTIN PARISH—Texas Co.'s Lake Mongouloi 2, Lake Mongouloi salt dome, sec 14-10s-9e, digging pits. Same operator's St. Martin Land Co. 8, Henderson prospect, sec 9-8s-7e, dr shale 8072 ft.

VERMILLION PARISH—Continental's Hebert 1, Abbeville prospect, sec 20-12s-3e, dr shale 248 ft.

VERNON PARISH — Llano Oil Corp.'s Llano Oil Corp.'s Llano 1, sec 7-1n-9w, washing to bottom 2950 ft.

WEST FELICIANA PARISH—Robert L. Morris's Percy 1, sec 89-1s-4w, abn 6058 ft. Southern Minerals Corp' 1, sec 54-1s-4w, pulling csg 750 ft.

NORTH LOUISIANA

BIENVILLE PARISH—R. O. Roy's Mower 1, 9-10n-1ow, sd 3050 ft. Rondeau et al's Locke 1, ne nw ne 9-15n-10w, elev 180 ft, rur. Walters et al's Davis 1, 3-16n-9w, mim.

BOSSIER PARISH — Bowman-Tidwell's Nattin 1, 15-22n-14w, woc 10-in csg 66 ft. Humphreys et al's Bulkley 1, 36-21n-13w, elev 212.3 ft, 8-in csg 2297 ft, bailed sw slight so, arr deepen, td 2306 ft. United Gas Pub. Serv. Co.'s Murff A-1, 17-17n-11w, elev 201 ft, top anhydrite 3585 ft, coring shale 5115 ft.

CADDO PARISH — Pyramid O&G Co.'s Wheeler A-1, 16-18n-16w, elev 250 ft, top anhydrite 3783 ft, 9⅝ in csg 3950 ft, dr shale 3978 ft.

CLAIBORNE PARISH—Sugar Creek Synd. et al's Darrett 2, 31-20n-5w, dr 6415 ft, red shale; Kilpatrick 1, sw ne 7-19n-5w, core hd shale 5495 ft. E. T. Oakes' Patton 1, 1-20n-5w, junked hole 4243 ft oolitic lime, rur for sec hole 50 ft away.

DE SOTO PARISH—Larkin & Waar's Jackson 1, 1-11n-14w, elev 329.4 ft, top first anhydrite stringer 4670 ft, massive anhydrite 4915-98 ft, base stringer anhydrite 5104 ft, arr make ds test of sg, td 5250 ft lime.

FRANKLIN PARISH—S. C. Jensen's Bailey 1, 12-11n-3e, 9⅝ in csg 206 ft, dr 850 ft.

LINCOLN PARISH — Ark.-La Gas Co.'s Causey 1, nw ne nw 32-19n-2w, elev 341 ft, base annona chalk 2632 ft, top Wolf City 2644 ft, top lower Cretaceous 3568 ft, dry and abn 4687 ft, lower Glen Rose. Lide & Greer's Simmie Gardner 1, 10-17n-4w, elev 268 ft, top red beds 3810 ft, top first anhydrite 4580 ft., core 5250 ft lime and shale.

MOREHOUSE PARISH—Henry E. Rodeau et al's Clark 1, se ne 10-20n-7e, elev 90 ft, rur.

NATCHITOCHES PARISH—Roy Raines et al's Raines 1, sw sw 28-9n-10w, sd 4303 ft.

RAPIDES PARISH—Amerada Pet. Corp.'s Weil 3, 52-1n-2e, cemtd 7-in csg 5713 ft, td 5719 ft. Texas Eagle Corp.'s State 1, 5-1s-2e, arr deepen 90 ft. Texas Co.'s Weil 1, 52-1n-2e, lcn abn; Weil 2, 53-1n-2e, 7-in csg 5714 ft, flowing 16 bbls oil per hour thru tub choke, td 5732 ft.

RED RIVER PARISH—I. J. Allen's Franklin Realty Co. 1, ne ne 20-11n-9w, cemtd 12½ in csg 110 ft, dr 500 ft. H. D. Conley et al's Long-Bell 1, 19-13n-9w, rur.

SABINE PARISH—Keen et al's Long-Bell 1, 5-8n-13w, rur. Laurel Pet. Co.'s Whitney Corp. 1, 8-9n-13w, mim (5500 ft test). A. H. Tarver's Baker 2, 36-8n-12w, elev 347.5 ft, top Zwolle marl 2205 ft, hole clean and pipe lodged again, td 5225 ft, had sg after coring 20 ft oolitic lime.

TENSAS PARISH—H. M. Jones' Chicago Mill & Lbr. Co. 1, 30-12n-10e, 10-in csg 208 ft, sd for fuel 700 ft, basal Jackson.

UNION PARISH—Lent, Sears & Bocher's Frost Lbr. Co. 1, nec 27-21n-1e, elev 198.3 ft, sd 3247 ft sandy lime.

WEBSTER PARISH—J. P. Evans' Crichton 1, 35-18n-9w, elev 214 ft, top first anhydrite 4700 ft, dr 5150 ft anhydrite. Ohio Oil Co.'s R. L. Holloway 6, ne sw 23-21n-10w, dr 7112 ft, red shale; Coyle 1, s½ se 23-21n-10w, rur. Red Hawk Oil Co.'s Baker 1, se nw 9-23n-9w, rur. J. L. Edwards Hooper 1, 8-17n-9w, elev 173 ft, fsg 2128 ft.

MICHIGAN

T. F. Caldwell, Inc.'s Kraus 1, 18n-3e-12, fsg 1779 ft.

CLINTON COUNTY—Stork Oil Co,'s Bross 1, 8n-2w-29, sd 1500 ft. Pet. Exploration's Cable 1, 5n-2w-12, rig.

CRAWFORD COUNTY — T. F. Caldwell, Inc.'s Huston-Lincoln 1, 25n-2w-7, rig.

EATON COUNTY — Burris and Keeler's Moon 1, 2n-4w-11, sd 2215 ft.

GLADWIN COUNTY — T. F. Caldwell, Inc.'s Parker 1, 18n-2w-21, dr 1000 ft. Mammoth Pet. Co.'s Mellinger 1, 18n-2w-35, dr 1900 ft. Chas. Bell's Ross 1, 18n-2w-34, dr 1500 ft.

HURON COUNTY — Wallace Markle's Opaka 1, 15n-11e-04, dr 2950 ft.

IONIA COUNTY—Frank Lyon's Geiger 1, 8n-8w-29, dr 1400 ft. Terry Dale's Tew 1, 6n-7w-12, dr 1200 ft.

ISABELLA COUNTY — Pure Oil Co.'s Keeler-Mitchell 1, 14n-6w-10, csd 5-in 3642 ft, dr 3691 ft; Comstock 1, 13n-6w-15, dr 1600 ft.

KENT COUNTY—Rex Oil Co.'s Johnson 1, 10n-1w-36, dr 2560 ft. Mich-Exploration's Croff

1, 7n-9w-35, dr 1700 ft. Associated Pet. Co.'s Plank 1, 9n-10w-29, dr 2350 ft.

MIDLAND COUNTY—J. V. Wicklund's Roher 1, 16n-1w-7, sd 3560 ft.

MONTCALM COUNTY — J. F. Martin's Christensen 1, 10n-6w-20, dr 600 ft. Old Dutch's Russell 1, 10n-6w-27, dr 2700 ft. Rowmor Oil Co.'s Tow 1, 10n-6w-36, dr 1200 ft. Terry Dale's Higgins 1, 9n-8w-13, rig. Jetter Oil Co.'s McCracken 1, 9n-5w-6, dr 600 ft. Star Petroleum Co.'s Ward 1, 9n-5w-20, dr 3000 ft. Michigan Gas Oil Co.'s Youngs 1, 9n-6w-1, dr 400 ft. W. E. Voss, Tr.'s McDonagh 1, 10n-8w-23, rig. McClanahan Oil Co.'s Lincoln Life 1, 12n-5w-29, dr 900 ft.

SAGINAW COUNTY — J. H. Hibbard's Woodward 1, 10n-5e-22, rig. T. F. Caldwell, Inc.'s McDanagh 1, 10n-5e-19, rig. Mid State's Burlson 1, 10n-5e-21, sd 2612 ft. St. Louis Pipe's Yadovack 1, 10n-2e-13, sd 2853 ft.

MISSISSIPPI

CLAIBORNE COUNTY — Claiborne O&G Co.'s (formerly Miss. Dev. Co.), Crawford 1, 6-13n-4e, sd 580 ft gumbo.

LAMAR COUNTY—Snow-Black Pet. Co.'s Miller et al 1, ne ne sw 3-4n-15w, woc 10in csg, td 1446 ft.

WASHINGTON COUNTY — Mid-Continent Dev. Co.'s Lee 1, 1-14n-8w, co to deepen, td 3016 ft.

WILKINSON COUNTY—Kirby Pet. Co.'s Lanehart 1, 22-1n-2w, spd.

MONTANA

FERGUS COUNTY—Minnesota Co. (formerly Fenholt et al), Fenholt 1, se nw sw 24-21n-17e, dr 2010 ft.

Judith Operating Co., Government 2, w nw ne 35-22n-17e, dr 801 ft.

CARBON COUNTY—Bailey Round Butte Oil Co., ne se 3-5s-22e, dr 1475 ft.

GLACIER COUNTY—L. P. Jackson and Stanley Gray, Dunbar 1, nw se nw 22-34n-7w, dr 733 ft.

PONDERA COUNTY — Gordan Campbell and associates nw ne nw 12-30n-4w, spd.

Nordan Corporation, Hollan 1, nw ne nw 12-28n-6w, dr 758 ft.

Texas Co. 1 Unit-1, cnw se 32-31n-5w, dr 150 ft.

NEW MEXICO

CHAVES COUNTY—John Tannehill, Campbell 3, cne se 1-11s-25e, dr 1045 ft.

EDDY COUNTY—Etz Bros.' State 2, cnw¼ sw 16-17s-30e, dr 2320 ft. Ohio Oil Co. State-McCullough 1, csw sw 16-17s-30e, dr 2960 ft. D. & B. Oil Co., Berry 1, cne nw 21-17s-30e, dr 1855 ft. Premier Oil Co., Dexter 2-E, sw ne 20-17s-30e, dr 2700 ft. Tignor, Etz & Keyes, Keyes 1-B, cse sw 3-17s-38e, dr 1130 ft. Red Lake Oil Co., State 6, cne sw 22-17s-28e, dr 1020 ft. Tex Patillo, Thomason 2, ne ne 1-20s-28e, dr 1065 ft. Dooley & Dixon, Commerce 1, cnw nw 18-20s-27e, dr 525 ft.

LEA COUNTY—Amerada's C. H. Weir 1-B, c sw ne 26-19s-36e, cem cas 3800 ft. Barney Cockburn & Rowan-Nichols Oil Co.'s H. G. Mattern 1, c sw se 7-22s-37e, rig. Conoco and California Co.'s E. M. Elliott 1, c sw sw 22-22s-37e, elev 3347 ft, dr 1600 ft. C. & G. Oil Co.-The Texas Co.'s Ellen Weir 1, c ne ne 14-20s-37e, dr 350 ft. Culberson-Irwin & Roy Stovall's J. B. Humphreys-Humble 1, c se sw 3-25s-37e, elev 3135 ft, top anhydrite 1030 ft, top salt 1124 ft, dr 3450 ft; J. R. Stuart-Repollo 1, c sw se 10-25s-37e, elev 3105 ft, base salt 2400 ft, sandy-lime pay 3280-3294 ft, fsh tools, est 1000 bbls oil and 10,000,000 ft gas. Landreth Prod. Corp.'s E. H. Grizzell 1, c se sw 5-22s-37e, spd sd to rur. Gulf Oil Corp.'s A. B. Reeves 1, c nw sw 29-20s-37e, dr 2790 ft; E. A. King 1, c sw nw 28-21s-37e, rig; W. T. McCormack 1, c ne ne 32-21s-37e, dk; Frona Leck 1, c nw ne 14-21s-36e, rig. Humble's W. B. Farrell 1, c sw se 22-22s-37e, machine. Harry W. Leonard et al's B. T. Lanehart-Humble 1, c sw ne 21-25s-37e, elev 3079 ft, top anhydrite 965 ft, cem 7-in cas 2991 ft. Liberty Oil & Drlg. Co.'s J. F. Hair-Repollo 1, sw sw se 24-24s-37e, elev 3157 ft, dr 3360 ft. Magnolia's Will Cary 1, c ne se 21-22s-37e, rig. Maljamar O&G Corp.'s M. E. Baish 6, c nw se 21-17s-32e, Maljamar area, elev 4028 ft, dr 3920 ft. Ohio Oil Co.'s Turner 1, c ne se 29-21s-37e, dr 130 ft. Oil Well Drlg. Co.-Southern Pet. Exploration, Inc.'s State 1-A, c sw ne 29-19s-37e, elev 3619 ft, dr in pay 3860 ft. N. G. Penrose and Rowan-Nichols Oil Co.'s Will Cary-Humble 2, c ne sw 22-22s-37e, elev 3345 ft, dr 2475 ft; Will Cary-Humble 3, c se nw 22-22s-37e, rust, td 1150 ft; Will Cary-Humble 4, c sw nw 22-22s-37e, mim. Plains Production Co.'s R. L. Mosley-Repollo 1, c nw se 34-24s-37e, elev 3168 ft, top anhydrite 1000 ft, pb to 3400 ft from sul w at 3550-51 ft, run tubing to test; Geo. Smith-Humble 1, c se se 4-25s-37e, elev 3174 ft, fsh 3025 ft. Repollo Oil Co.'s E. H. Bolding 1, nw nw nw 10-20s-37e, elev 3551 ft, dr 2830 ft; M. J. Boyd 1, swc n½ 23-22s-37e, elev 3337 ft, cem cas 3239 ft, td 3250 ft; A. L. Christmas 1, ne ne ne 28-22s-37e, elev 3344 ft, inc show oil 3550-64 ft, dr 3570 ft; R. M. Jones 1, nwc se nw 35-22s-36e, elev 3526 ft, fsh 2730 ft; W. C. Roach 1, nw nw nw 21-20s-37e, elev 3530 ft, dr 2730 ft; J. H. Williams 2, sw sw se 33-19s-37e, elev 3568 ft, dr 3540 ft. Samedan Oil Corp.'s C. U. Parks 1, sw sw sw 14-22s-37e, elev 3339 ft, est 3½ mil ft gas 2464 ft, dr 2560 ft. Skelly Oil Co.'s A. L. King 1, c se nw 4-23s-37e, elev 3331 ft, completed, flowed 142 bbls daily from sandy-lime pay 3562-3683 ft; B. L. King 1, c sw se 32-22s-37e, elev 3369 ft, flowed by heads after shot, td 3680 ft, sd to pump. Sun Oil Co.'s A. D. Richards 1, c ne se 6-23s-37e, elev 3376 ft, dr 3350 ft; W. W. Weatherly 1, c ne sw 17-21s-37e, elev 3485 ft, cem 9⅝-in cas 2586 ft. The Texas Co.'s W. T. Lanehart 1, c ne¼ 29-25s-37e, dr 2770 ft. Tide Water's Anna Walden 1, c se ne 21-22s-37e, dk. Warren L. Todd et al's Lemon 1, c nw se 17-21s-32e, elev 3630 ft, top anhydrite 990 ft, salt series 1132-3260 ft, sdo 3752 ft.

OKLAHOMA

ATOKA COUNTY—Riverland O. & G. Co.'s Jones 1, sw sw ne 4-3s-9e, mim.

BECKHAM COUNTY—Wood Pet. & Royalty Corp.'s Blair 1, nw nw se 32-9n-26w, sd 2989 ft. Carter Oil Co.'s Davidson 1, cnw sw 2-9n-25w, dr 3245 ft.

BRYAN COUNTY—Trio Oil Co.'s Gilbert 3, csw 25-8s-7e, rur.

CADDO COUNTY—Denver P. & R. Co.'s Sah-Cam 1, cse se 33-10n-10w, recovered crowbar, dr window in pipe at 7900 ft.

CARTER COUNTY—Carter Oil Co.'s Humble-Williams 1, sw ne sw 27-2s-3w, td 8105 ft, flowed 3309 bbls oil. Carter Oil Co. et al's Leon Voorhees 1, cse sw 34-5s-2w, dr 3408 ft. The Texas Co.'s Cathey 1, se ne ne 6-5s-1w, dr out cement, td 4191 ft, running tubing.

COAL COUNTY—Shell Pet. Corp.'s Hill 3, se se nw 30-3n-10e, dr 5766 ft.

COMANCHE COUNTY—Melling's Miller 1, ne ne sw 23-4n-12w, dr 962 ft.

GARFIELD COUNTY—Sherry et al's Hoken 1, nw nw sw 32-20n-4w, fsg 6240 ft. Stanolind-Amerada's Brunken 1, sw sw ne 32-23n-4w, td 5962 ft, rust.

HARMON COUNTY—Lioalko Trust Ltd.'s Crasnoe 1, se se sw 14-3n-25w, dr 1776 ft.

HUGHES COUNTY — Schumacher et al's Schumacher 1, ne nw ne 23-5n-10e, td 1782 ft, D & A. Canavan's Meadors 1, ne se sw 5-8n-10e, flowed 20 bbls oil. Phillips Pet. Co.'s Eberle 1, ne ne sw 12-5n-9e, coring 4372 ft. Sivils et al's Montgomery 1, nw sw nw 7-9n-9e, dr 2975 ft. George Orr et al's Morgan 1, ne se sw 6-7n-9e, cellar & pits. Sinclair Prairie et al's Wilkey 1, sw sw sw 23-9n-8e, spd & rur. Blackwell O. & G. Co.'s Long 1, se ne nw 29-9n-9e, lcn.

JACKSON COUNTY—Jackman's Fee 1, sw sw sw 27-1s-24w, td 2528 ft, fsg 4 joints dr pipe. Burnham's Oliver 1, nw nw se 26-1n-20w, td 1380 ft, wocs. Universal Oil Co.'s Briscoe 1, nw sw ne 36-1s-20w, dr 1730 ft.

JEFFERSON COUNTY—Campbell's Trout 1, se ne ne 6-8s-7e, dr 1770 ft. Reno Oil Co.'s Gaun 1, se sw ne 35-6s-4w, dr 2485 ft.

JOHNSTON COUNTY—Moore & Wirick's Westheimer & Daube 1, se nw ne 19-3s-4e, dr 3252 ft. Magnolia Pet. Co.'s Green 1, ne ne ne 12-2s-7e, dr 1100 ft.

KAY COUNTY—Allen & Texas Co.'s Fulton 1, se se se 18-27n-4e, rust.

LOVE COUNTY—Sinclair Prairie's Stockton 1, se se sw 26-6s-2w, dr 7395 ft. Russell et al's Scott 1, sw se sw 29-8s-2e, sd 4968 ft. Amerada-Stanolind's Westheimer & Daube 1, sw se sw 27-6s-2e, dr 7187 ft.

MARSHALL COUNTY—Singley et al's Halford 1, se sw sw 22-7s-4e, sd 515 ft. Smith's Chestnut 1, ne ne ne 23-8s-5e, sd 500 ft. Helmerich & Payne's Taliaferro 1, nw se sw 26-5s-5e, lcn.

McCLAIN COUNTY — Arab Pet. Corp.'s Autry 1, nw nw nw 16-7n-3w, dr by to bottom, cement 400 sacks to 8000 ft, wocs.

McCURTAIN COUNTY—Louis Sykes' Mitchell 1, cnw sw 12-9n-26e, rur.

McINTOSH COUNTY—I. T. I. O. Co.'s Toncred 1, sw nw se 9-9n-14e, dr 4345 ft. Phillips Pet. Co.'s 1, ne ne nw 3-9n-13e, digging cellar & pits.

NOBLE COUNTY — Continental Oil Co.'s Pruitt 1, nw se sw 19-20n-1w, td 4992 ft, rust.

OKFUSKEE COUNTY—Champlin Ref. Co.'s Thompson 1, sw sw nw 7-13n-8e, dr 140 ft. Amerada-Stanolind's Wells 1, sw sw nw 7-11n-7e, cellar & pits.

OKLAHOMA COUNTY—Hollenback et al's Cooper 1, nw nw ne 15-11n-1e, dr 4889 ft.

OSAGE COUNTY—Elfred's Beck 1, se se ne 6-23n-7e, dr 1170 ft. Midco et al's 1, nw nw se 11-23n-6e, spd. Champlin Ref. Co.'s 1, sw sw ne 35-25n-6e, spd 235 ft. Stoner Bros.' 1, nw ne sw 18-22n-8e, lcn. Gray & Tolson's 1, sw sw ne 33-25n-7e, br.

PONTOTOC COUNTY — Mid-Texas Pet. Co.'s Whitney 1, sw sw se 30-5n-4e, td 1946 ft, pumped 50 bbls oil, comp. Sandback et al's Sands 1, ne ne ne 20-3n-5e, dr 427 ft. Shaw's Illinois Bankers Life 1, nw se nw 1-4n-5e, dr 2837 ft.

POTTAWATOMIE COUNTY — Gulf Oil Corp.'s Bois-Clark 1, sw se se 21-6n-4e, dr plug 3100 ft.

SEMINOLE COUNTY — Amerada et al's Community Stout 1, ne ne sw 3-10n-5e, flowed 617 bbls oil 17 hrs. Imperial Drlg. Co.'s Aldridge 1, sw ne nw 32-9n-8e, td 1987 ft, pb 1900 ft, so, est 1 million cu ft gas, to shoot. Arkansas Royalty Co.'s Kiker 1, se se ne 9-10n-7e, sd. Sinclair Prairie et al's Harrison 1, ne ne nw 17-8n-8e, td 3068 ft.

STEPHENS COUNTY—Endicott et al's McFatridge 1, nw nw sw 11-3s-9w, dr 1171 ft. Clyde Rhodes et al's Doak 1-A, sw sw sw 1-1s-5w, td 1803 ft, D & A.

TILLMAN COUNTY — Gulf Oil Corp.'s Wearmouth 1, se nw se 31-1s-16w, sd 4440 ft. Smith's Hammill 1-A, ne nw nw 6-5s-15w, sd 495 ft.

EAST TEXAS

ANDERSON COUNTY—Tide Water & Seaboard Oil Corp.'s S. & I. Murray 1 (315-ac), S. Sanchez sur No. 2-10, Long Lake field, elev 275 ft, Pecan chalk 3533-3712 ft, Austin chalk 4690-4950 ft, dr 5275 ft. Gulf Oil Corp.'s Mary J. Ross 1 (54.7-ac), Robt. Erwin sur, Camp Hill area, elev 487 ft, top Georgetown lime 5452 ft, rur to dd fr 5476 ft to Trinity sand. Comer E. Todd et al's W. T. Todd 1 (100-ac), A. B. Patton sur, Boggy Creek field, sd 2390 ft.

BOWIE COUNTY—Ben J. Russell et al's O. A. Hall 1, J. W. Weaver sur, 9 mi sw New Boston, elev 316 ft, top Annona chalk 1646 ft, sd 3424 ft. Woodley & Bentley's J. D. Lumpkin 1 (245-ac), John McDermott sur, 1¼ mi sw Dalby Springs, elev 290 ft, Annona chalk 1665-2090 ft, sd 3260 ft.

CASS COUNTY—American-Liberty Oil Co.'s D. A. Maxcy 2 (86-ac), John Collum sur, elev 265 ft, dr 2000 ft; Maxcy 3, rig; Marcus Rambo 1 (86.9-ac), J. H. Rives sur, elev 265 ft, top Red Beds 3330 ft, top anhydrite 5008 ft, dr 5050 ft. Adair Heath et al's Moore Branch School 1 (2-ac), M. Reams sur, lcn. E. Key, Jr., et al's C. M. Barkett 1 (2.74-ac), John Collum sur, lcn. McElvain & Beckett's D. A. Maxcy 1, B. J. Murray sur, rig. Magnolia Pet. Co. (was R. W. Norton, Tr.'s) L. A. Haywood 2 (440-ac), P. Evans sur, elev 255 ft, dr 1010 ft; Mary Rives 2 (85-ac), John Collum sur, elev 225 ft, Annona chalk 1925-2475 ft, top Red Beds 3441 ft, top anhydrite 4990 ft, dr 5450 ft. The Texas Co.'s E. E. Hall 1 (80-ac), Jas. Young sur, mim. G. H. Vaughn Production Co.'s R. P. Willis (67-ac) 1 to 9, inclusive, lcns. United Production Corp.'s Eva Fields 1 (61-ac), John Collum sur, rig; Fields 2, lcn; J. T. Stewart 1 (49-ac), John Collum sur, dk.

CHEROKEE COUNTY — R. L. Peveto, Housh & Mayo's C. R. Kelley 1 (east) Jose Pineda sur, 3 mi n Jacksonville, elev 565 ft, top Pecan chalk 3440 ft, dr 3750 ft.

COLLIN COUNTY — Port Bolivar O&R Co.'s O. G. Durning-Clarkston 1-A (140-ac), Wm. Creager sur, Pat. 1193, elev 722 ft, sd 3866 ft.

FRANKLIN COUNTY—Lucey Pet. Co.'s A. W. Crawford 1 (50-ac), O. James sur, dk. Ned B. Morris, Jr., et al's R. H. Harper 1 (4-ac), C. Payne sur, lcn. W. F. Nenney et al's Prairie Academy-Methodist Church 1 (4-ac), Wm. Bridwell sur, lcn. E. W. Rylander et al's B. J. Wells 1 (3¾-ac), J. K. Rogers sur, lcn.

FALLS COUNTY—J. Edward Mills et al's Sam Grucholski 1 (40-ac) Dennis Herold League, 5 mi sw Kosse cem sur cas.

FREESTONE COUNTY — Tide Water & Seaboard Oil Corp.'s J. L. Johnson 2 (894-ac), H. Wheeler sur, Long Lake area, dr 1500 ft. Roger Stewart & Watson's Trinity Farm Security Co. 1 (45-ac), R. M. Williamson sur, rig. J. C. Yancey & Lovering's M. Scott 1, H. Awalt sur No. 4, 7 mi n Fairfield, sp and sd.

GRAYSON COUNTY — Olson Drlg. Co.-James H. Gardner et al's sw Life Insurance Co. 1 (160-ac), J. C. Jamison sur, A1865, 3 mi n Pottsboro, elev 767 ft, top Sylvan shale 4870 ft, Viola lime 4901-5096 ft, dr black shale 5735 ft. Port Bolivar O&R Co.'s Creed Taylor 1 (160-ac), J. Fitzhugh sur, 3 mi se Gunter, sd 3931 ft.

HENDERSON COUNTY—Wm. McDougal, Tr, et al's Elvira Price 1 (216-ac), M. Mathews sur, 4 mi s Trinidad, dk. H. M. Wilson et al's fee 1 (943-ac), Thomas Caro sur, 5 mi n Malakoff, elev 359 ft, top Pecan chalk 2300 ft, fsh 2800 ft.

HOUSTON COUNTY—Branch et al's P. S.

Griffiths 1, John Hagan sur A-39, 3 mi sw Crockett, mim.

KAUFMAN COUNTY—J. M. Scott & J. B. Woodside's E. Robinson 1 (80-ac), A. Chirnio sur, 2 mi w Scurry, rig.

LAMAR COUNTY — Barrett, Saloman & Brooks' Haynes-McQuistion 1 (25-ac), A. W. Wright sur, lcn. J. A. Forrester et al's J. S. Woodward 1 (18¾-ac), J. W. Woodward sur, 1½ mi e by s of Minter, elev 402 ft, top Georgetown lime 2256 ft, Paluxy sand with trace gas 3060-3144 ft, top anhydrite 3735 ft, base hard anhydrite 4075 ft, broken to 4105 ft, sd 4360 ft.

LIMESTONE COUNTY—C. F. Lytle et al's J. L. Thompson 1-T (141-ac), w side Mexia field, Trinity test, coring 5720 ft. Monte Oil Co.'s A. L. Rosson 1 (1003½-ac), P. Lloyd sur, blk 4, nw edge old Nigger Creek field, Austin chalk 2540-2770 ft, top Woodbine sand 2840 ft, sd 2970 ft. G. L. Rowley et al's Dean Hrs. 1 (75-ac), P. Varella sur, 3½ mi sw Mexia, lcn.

MORRIS COUNTY—Raycotuck, Inc.'s P. M. Staggers 3 (40-ac), J. D. Nelson sur, elev 369 ft, pb fr 4139 to 1500 ft, account crooked hole, top Pecan chalk 2500 ft, re-drl 3710 ft.

RED RIVER COUNTY—J. S. Abercrombie Co.-Harrison Oil Co.'s Temple Pine Lumber Co. 1, D. D. Bruton sur, 10 mi ne Clarksville, rig. Annona O&G Co.'s Leo & Otto Roberts 1 (200-ac), Jas. Bankston sur, 2 mi ne Annona, elev 396 ft, Pecan chalk 40-380 ft, sd 725 ft. R. H. Manning & Texfornia Co.'s Hocker-Hughes 1 (80-ac), MEP&P Ry. sur No. 642, 6 mi sw Lydia, cem 12½-in cas 200 ft. B. B. Orr et al's Kurth Lumber Co. 1, Elizabeth Smith sur, 11 mi ne Clarksville, top Georgetown lime 600 ft, dr 990 ft.

ROCKWALL COUNTY—W. H. Carlin et al's W. H. Lofland 1 (54-ac) M. B. Jones sur, ¾ mi w Rockwall, cem cas 104 ft. R. J. Sherman & Dodd's M. F. Lofland 1 (392-ac), W. H. Beard sur, 2½ mi se Rockwall, sd 750 ft.

RUSK COUNTY—McCallum et al's E. C. Gary 1 (265-ac), John Piburn sur, 5 mi s Henderson, elev 338 ft, Pecan chalk 2448-2715 ft, top Austin chalk 3224 ft, sd 3440 ft. Pure Oil Co.'s W. H. Faulkner 1 (60-ac), Wm. Elliott sur, 5 mi e Mount Enterprise, Trinity sand or 8500-foot test, elev 563 ft, Pecan chalk 2650-2890 ft, show gas when cut through fault, top Austin chalk (soft) 3286 ft, hard chalk 3321 ft, top Georgetown lime 3446 ft, cem 9⅝-in cas 3482 ft, dr 3500 ft. J. W. Shipman et al's Citizens Nat'l Bank (L. T. Burton) 1-A (125-ac), J. J. Y'Barbo sur, 4 mi ne Henderson, elev 432 ft, top Pecan chalk 2355 ft, sd 3510 ft, will install rotary.

SMITH COUNTY—W. L. Cloud et al's Dora Kendall 1-A, John Williams sur, 3 mi e Van field, sd 1290 ft. Kelso & Thompson's McClung 1 (23½-ac), E. Newberry sur, 1 mi e Winona, elev 449 ft, Pecan chalk 3335-3660 ft, sd 3780 ft.

TITUS COUNTY—Jules Alford, Tr., et al's J. E. Fry 1 (120-ac), I. P. Stern sur, elev 319 ft, top Georgetown lime 3550 ft, dry and abd td 4275 ft. M. S. Beck et al's fee 1 (17/100-ac), lot 11, blk 16, Talco townsite lcn. J. C. Burnett et al's Addie L. Truitt 1, blk 40, Talco townsite, lcn. C. & G. Oil Co.'s J. W. Cooper 1, (3½-ac), J. M. Nugent sur, lcn. Earl Callaway et al's W. T. Sullivan (4-ac) 1, I. P. Stern sur, lcn. L. B. Culberson et al's E. Unsell 1, c lot 1, Talco townsite, lcn. Leland Fikes et al's Talco Townsite Co. (100-ac) 1, M. V. Delgado sur, lcn. Jack Hearrell et al's L. J. Truitt 1, blk 40, Talco townsite, lcn; E. Unsell 1, c lot 16, blk 6, Talco townsite, lcn. Hollandsworth Drlg. Co.'s A. O. Brown 1 (52/100-ac), Talco townsite, lcn. Humble's Myra Galt 1 (80-ac), R. I. Winn sur, A-622, elev 346 ft, Pecan chalk 1658-1785 ft, dr 3965 ft; M. B. Groves 1 (82.9-ac), Ben Jones sur, elev 309 ft, Pecan chalk 1591-1733 ft, Eagle Ford shale 2862-3240 ft, top Woodbine 3240 ft, top Red Beds 3590 ft, top Georgetown lime 3991 ft, td 4492 ft, cem 8¼-in cas 4475 ft, and sdo; M. B. Groves 2 (1440 ft s No. 1), top Pecan chalk 1660 ft, dr 1800 ft. C. M. (Dad) Joiner et al's Huensch 1 (1416-ac), Henry P. Banks sur, 12 mi e Talco, elev 317 ft, top Pecan chalk 1896-2122 ft, dr 2500 ft. Lucey Pet. Co.'s M. Hazelwood 1 (4¼-ac), M. V. Delgado sur, lcn. Magnolia's C. M. Carr 1 (70-ac), M. V. Delgado sur, cem surface cas 240 ft. Ned B. Morris, Jr. et al's W. H. Hughes 1 (6½-ac) M. V. Delgado sur, lcn. B. C. Morrison et al's T. Savage 1 (4-ac), J. Salmon sur, lcn. W. F. Nenney et al's Prairie Academy-Methodist Church 1 (4-ac), Wm. Bridwell sur, lcn. Owens & Porter's Church of Christ 1, c lot 3, blk 25, Talco townsite, lcn. Allen M. Peairs et al's fee 1, c lot 1, blk 30, Talco townsite, lcn. Mrs. O. J. Phillips et al's fee 1, c lots 17 and 18, blk 6, Talco townsite, lcn. S. G. Reed & R. S. Barnwell's U. Shaw 1 (7/8-ac), Talco townsite, lcn. Rollins & Diffie's Hazelwood 1 (40-ac), I. P. Stern sur, lcn. John T. O'Neal & C. M. Joiner's O. C. Lilienstern 1 (80-ac), Wm. Gann sur, 5 mi se Talco, elev 302 ft, Pecan chalk 1375-1572 ft, top Georgetown lime 3560 ft, top Paluxy sand 4360 ft, dry and abnd, td 4487 ft. G. Stratton et al's J. F. Barton 1 (1-ac), Talco townsite, lcn. G. L. Tatum & D. H. Dunbar's J. Easterling 1, c lot 6, blk 16, Talco townsite, dk. G. H. Vaughn Prod. Co.'s S. G. Belcher 1 (80-ac), I. P. Stern sur, lcn.

UPSHUR COUNTY—Joe A. Papadakis et al's P. K. Williams-Cone 1 (50-ac), blk 5, J. P. Justamente sur, elev 396 ft, rig.

SHELBY COUNTY—Farley & Sommers' W. C. Windham 1, Wm. Leach sur, core shale 3465 ft. Potter & Rimbley's O. H. Polley Est. 1, Wm. Whisner sur, fsh 3050 ft. H. A. Stebbinger's Pickering Lbr. Co. 1, C. F. Henry sur, shot csg 3700-3800 ft with 100 shots, tested sw and so, tested sw so 3891 ft, arr deepen td 3912 ft.

SOUTH TEXAS

ARANSAS COUNTY—Buckingham Oil Co.'s McCampbell 1, lots 8 and 9, sec 41; lots 8 and 9, sec 42, McCampbell subd, James Orick sur, 2 mi nw of Aransas Pass, 8 ft fr San Patricio County lines, sands showed on electric formation test from 5425-7120 at 6534-46, 6819-24, 6900-07 ft, td 7501 ft, plugged back to 6545 ft, blew out while making dst, showed 225 lbs. pressure wet gas, oil from pits tested 25.5 gravity, setting up new rig, will attempt to go over drill pipe.

ATASCOSA COUNTY—R. C. Lee, Trustee (Atascosa Trust), U. A. Doumch 1, 152-ac tr, blk 10, J. T. Russell sur No. 1222, 3 miles n Poteet, dr 3450 ft. W. B. Hinton's Weigand 1, in Donovan sur No. 145, lcn. R. McIntyre's (Cliff Oil) San Antonio Joint Stock and Land Bank (H. A. Billinck) 1, J. B. Woodleff sur No. 246, 7½ mi e Coughran, sd 3185 ft, elev 341 ft df.

BASTROP COUNTY—Howell & Appleton's Herman Klemm 1, Richard Teal sur, sd 1229 ft. Marts & Beavens Parkford & Jenkins 1, in center of lot 24, Bastrop Town tr, mim. J. E. Mills C. O. Randle 1, 100-ac tr in B. Brymer sur, td 2266 ft, set 5 3/16-inch cas at 2228 ft, woc.

BEE COUNTY—The California Co.'s W. A. Boothe 1, 100-ac tr, A. Walker sur, one mi e of Mineral, td 4152 ft, ran Schlumberger, no shows, plugged and abnd. Geo. M. Church et al's G. A. Ray 1, Anna Burk sur, 2 mi e Beeville, dr 2980 ft. Marine Oil Corp.'s Webb-Hearn 1, in 92-ac lease, E. Ryan sur, 2000 ft se disc well Beeville field, sd 5933 ft, set 7-inch casing to bottom, gun perforating; first perforations 5905-5914 ft, then 5859½ ft, show a little gas after setting packer at 5871 ft, td 5936 ft. H. A. Pressey's R. T. Hicks 1, 1120-ac tr, Jose M. Uranga gr, at 568 ft, 4½ mi s of Normana, drlg 2920 ft. G. M. Richardson et al's Mengers 1, center w 100-ac of W. R. Ryan 500-ac tr, Wm. Allen sur, near Tynan, Burton Drlg. Co., abnd lcn.

BEXAR COUNTY—American Gas Co.'s Oliver No. 5, 400-ac tr M. F. Rodriguez sur, Gas Ridge, td 3005 ft, underreaming. Carter & Ingersoll's Louis Mann 1, 60-ac tr, John Christopher sur, 3 mi s Von Ormy, still sd at 968 ft. Crouch & Shadrock's W. Kohler 3, 88-ac tr, J. M. Barrera sur No. 58, skidded on rig and sp. Joe Deupree's Mrs. R. S. Nina (R. S. Coffey) 1-A, Ridriquez sur, 7 mi s San Antonio, td 1200 ft, recemented at 1059 ft, bailed down, cement gave way, water broke in, drlg out cement; S. G. Winter 1, 100-ac tr in Fernando Rodriguez sur, one mi w of No. 1 Russell, dr 1422 ft Taylor marl. Dorine Oil Co.'s S. Tudyk 3, 330 ft sl and el of 315-ac tr, J. Cardinas sur No. 25, one mi sw of St. Hedwig, coring 574 ft. Nick Morosi's Teodoro O. de Ruiz 1, 1160 ft s New Laredo Highway, 160 ft e of wl of lse, F. Rolen League and Labor sur No. 48, just s of Von Ormy and just w of Medina River, spud in. H. J. Moore's Mrs. Lena Eisenhauer 1, 80-ac tr in Gertrude Rodriguez sur, 9 mi ne of San Antonio, sd 692 ft. O. M. Owensby's Minna Coreth 1, 284.04-ac tr, Adam Stafford sur No. 49, near Eckert field, still sd, 1091 ft. W. H. Schaeffer Co.'s A. Mihaliski 2, 1070 ft sl, 680 ft wl of 98-ac tr, J. M. Bustillos sur, abt 175 ft sw No. 1, coring 554 ft. H. B. Schumacher's Hilda Gillette 1, 49-ac tr in M. G. de Alamiz sur No. 20 and 7 mi s of San Antonio, moving in rotary, td 704 ft. F. M. Shaver's A. W. Bitter 2, Jose Baerrera sur No. 58 (750 ft n of former lcn), td 517 ft, sand 476-517 ft, set 8-inch csg at 475 ft, could not complete, prepare to dd.

BROOKS COUNTY—The California Co.'s B. Garcia 1, tr No. 3, Las Mestinas de Gonzalina gr, Alta Mesa dist., coring 5645 ft.

BURLESON COUNTY — Walter Blumenthal's G. V. Crain 1, W. C. Pearce sur, ab 297, 1 mi fr Milam County line, td 6340 ft, pb to 6300 ft, dr out to 6320 ft, dst 6300-28 ft showed no pressure, no oil, little gassy mud 30 min; second test showed nothing; dst 6246-6316 ft showed 30 thribbles mud and salt water 18 min, dry and abnd.

CALDWELL COUNTY—Detroit-Texas Dev. Co.'s W. P. Dunlap 3-A, S. F. Sanders sur, Dunlap area, sd 2390 ft. J. J. Elam et al's Francis-Brown-Cochran 1, W. F. Young sur, 5 mi e of Luling, sd 27 ft to lay new water line. W. C. Jenning's McMahan 1, James Pinchback sur, se of Lockhart, td 2324 ft, sd for csg. W. W. Lincoln's W. Branyon 1, 154 ft nl, 150 ft el of 20-ac tr, Dillard Cooper sur, td 2065 ft, initial production 20 bbls day on pump; W. Branyon 2, 150 ft wl, 420 ft nl of 20-ac tr, Dillard Cooper sur, 330 ft sw No. 1, lcn. Ogden & Reed's Mamie Barber et al 1, 65-ac lse in Squire Damon sur, and 5 mi nw of Dale, td 2004 ft, acidized, did not test, sd; No. 2

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Mamie Barber et al, 65-ac lse, Squire Damon sur, coring 1940 ft. Fred G. Scott's E. P. Dunavent 1, 4 mi se San Marcos, dry and abnd 245 ft. M. R. Tinkle et al's Arnold 1, S. Seal sur, Dunlap area, lcn.

CALHOUN COUNTY—Hilton & Miese's J. Brundrett 1, in Wm. Little sur, reinstated, sd 192 ft, to move in materials. Humble O&R Co.'s P. H. Welder 2, 2640 ft nwl and nel of 1937.6-ac tr in 10,000-ac lse J. M. Rios sur, td 2965 ft drlg sand, shale and bldrs.

DE WITT COUNTY — Southwestern Dev. Synd. Ltd.'s W. L. C. Poetter 1, 590-ac tr in Obid Marshall sur and 1320 ft w Slick No. 1 Poetter, lcn. Universal & Gillespie's Schubel 1, C. Fitzgerald sur, abt 2 mi nw Yoakum, drlg 1350 ft.

DUVAL COUNTY—Calibdo Oil Properties, Inc., (C. H. Buckley et al), C. S. Tinney 1, sur 8, drlg 2531 ft. G. E. Glasscock's Milano Land & Garden Co. 1, ne corner of sur 88, but in sur 87, 6 mi se of Gov't Wells, dr 2120 ft. Frank J. Gravis et al's Gravis et al 1, sec 250, 9 mi w San Diego, coring 4540 ft. Kepley Prod. Co.'s C. D. Sevier 1, sur 71, Santa Rosalia gr, coring 3172 ft. Jameson & Byron's S. Benavides 1, e½ sur 173 ½ mile s Cole field, ru. Magnolia Pet. Corp.'s ra G. Yates 1, sur 556, coring 2451 ft. Marzo Oil Co.'s E. R. Hagist 3, 1980 ft nl, 570 ft wl of sur 269, drlg 1200 ft. M. D. Masten's D. Ruiz 1, n½ sur 128, ½ mi s Hoffman field, td 60 ft, set 10-inch sur csg and sd. Rio Bravo Oil Co.'s W. R. Peters 1, 160-ac lse, sec 397, J. H. Gibson sur, 2 mi e Kohler field, lcn. Smith & Hamill's M. C. Hubbard 1, sur 69, one mi s of Loma Novia field, drlg 2265 ft. Stanolind O&G Co.'s Ira G. Yates 3, sur 559, se of Seven Sisters field, td 2974 ft, sd for water.

EDWARDS COUNTY—Paul Teas' J. B. Stewart 1, sec 2, GC&SF sur, 14 mi se Rock Springs, dr black shale 4922 ft.

FAYETTE COUNTY — Ben G. Barnett's Sandy McKinnon 110-ac tr in Adam Zumwalt League, 10 mi nw Flatonia, drlg 2145 ft, Carrizo sand 2143-45 ft, fresh water Wilcox fossils in sand, top Mount Selman 1090 ft.

FRIO COUNTY—Amerada Pet. Corp.'s T. G. McWilliams et al 1 (tr 3) Jose Arocha sur 299, top Austin chalk 5383 ft, csg 5393 ft, td 5575 ft, potential test 359 2/3 bbls in 8 hrs or 1079 bbls per day, ¾ choke; T. G. McWilliams et al 1 (tr 6) Arocha sur 298, td 5458 ft, set csg, woc; T. G. McWilliams et al 1, (tr 17), J. M. Tijerina sur 300, top Austin chalk 5439 ft, casing 5442 ft, td 5676 ft, making potential test; Halff & Oppenheimer 7, B. J. Gilman sur, td 3920 ft, set csg 3916 ft, oil sand 3916-20 ft, dr out plugs, wait on standard tools; Elgin O. Kothman, B. L. Crouch sur No. 90/9, ½ mi s of 3900-foot production and 1½ mi e of 5600-foot production, td 5506 ft, top Austin chalk 5244 ft, set csg 5252 ft, potential test 58 bbls in 8 hrs, ¾ choke or 174 bbls day; W. H. Smith 1, begin ne cor J. B. Mason sur No. 322, thence s along el 4552.5 ft, thence 1550 ft w at rt angles 4½ mi sw prod, td 6238 ft, pb and perf 5360-5500 ft, comp 1000 bbls day; W. H. Smith 2, 1476-ac tr and J. V. Mason sur No. 322, w offset Mitchell, dk. Termo Co. of Texas's A. L. Arp 1, s cor of 102-ac tr, Blair sur, dk. 400 ft w of prod, Rowan & Hope contractors for 5600-ft test. T. Davis et al's Halff & Oppenheimer 1, J. D. Clare sur No. 336, 1 mi ne of Pearsall production, top chalk 5330 ft, csg 5337 ft, td 5433 ft, showing considerable oil, moved off rotary, moving in standard tools.

GOLIAD COUNTY—Magnolia Pet. Co.'s S. J. Tipton 1, A. S. Thrumond sur, near common cor of Karnes-DeWitt-Goliad counties, dr 3586 ft. Zeni Oil Co.'s (Cotton Belt) Lutenbacher 1, blk 25, Goliad Townsite sur, south of Goliad, td 5545 ft, hard cap 5530-44 ft; soft sand 5544-45 ft, blew several hrs, made considerable gas and spraying a little oil, bridged over at 3205 ft, ds stuck, sd for orders.

GONZALES COUNTY—O. M. Owensby et al's H. B. Steen 1, N. M. Bane sur, sd 2135 ft. Tull et al's Boska 1, 61.2-ac tr, B. McClure sur, sd 1956 ft.

GUADALUPE COUNTY—Paul Armstrong's Clem Brodnaux 1, 36-ac tr, W. P. King sur, 2 mi ne Kingsbury, td 2425 ft, dst 2397-2425 ft, 30 min, show 37 thribbles sw and sulphur water. J. E. Clark's E. W. Williams 1, Green DeWitt sur, drlg 1960 ft. Clark & Gay's Waldrip 1, center 1½-ac tr in Staples Townsite, G. Allen sur, sd 780 ft, oil show at 744 ft, set 6⅝ csg 715 ft, top chalk 715 ft. Clark & Weinert's Anderson No. 1, Green DeWitt sur, dr 500 ft. Louis Crouch's J. Getzke 1, J. D. Clements sur, dr 2167 ft. Eickenroht & Gallagher's O. H. Jahns 1, 840-ac tr, Green DeWitt sur, 3 mi se South Darst Creek, Edwards lime test, coring 2610 ft. R. C. Robbins' Mrs. J. W. Manford 1, James Hodges sur No. 374, 1250 ft e Manford pool, complete 7 bbls day, top chalk 2500 ft.

HIDALGO COUNTY—Dean Brothers' Mrs. Lula B. George 1, tr 13, porc 41, Reynosa Juris, 7000 ft e of discovery, 700 ft n of Samfordyce production, td 2750 ft, upper gas sand 3694-3742 ft, shale break at 2742-48 ft, oil saturation 2748-50 ft, making dst. Gerald O&G Co.'s Nelson Mortgage Co. 1, blk 38, lot A La Blanco Agricultural subd, about 4 mi s City of Donna, sd 1800 ft to move in larger rig. Gulf States Oil Co.'s J. C. Engelman 3, lot 3, blk 70 Las Mestinas gr, 700 ft e of Mestinas field disc well, dr 5210 ft. Maxwell-Mundy-Morris' Southland Dev. Co. (Hidalgo County Water Control & Impr. Dist.) 1, lot 11, blk 20, Alamo Land and Sugar Co. subd, Alamo gr, 4 mi s Alamo, td 725 ft, csg set 670 ft, will perf 652-60 ft, waiting on perforator. H. J. Porter et al's C. H. Swallow, lot 5, Porter subd, Minnesota-Texas Land & Irrigation Co. tr, S. Alamo, sp and sd. Quintana Pet. Corp.'s John C. Engelman 1, coring 7850 ft. Dayle L. Smith Oil Co.'s Fairbanks & Young 1, blk 44, porc 46, Reynosa Juris, 4 mi e Samfordyce field, td 1810 ft, reamed to 1640 ft and sd. Union Sulphur Co.'s ARGL&I 7, tr No. 2309, blk 59, about 4000 ft e of Mercedes field, td 7608 ft, set 5-inch casing at 7530 ft, recompleting, gun perf 7545-49 ft, sd for orders; ARGL&I Co. 8, lot 2120, blk No. 87, N. Capisalla district, td 7502 ft, set oil string at 7350 ft, drlg plugs; ARGL&I Co. 9, farm tr 2268, blk 59, N. Capisalla district, (abt ½ mi e of disc), dr 4000 ft. Yates McCurry's Southland Dev. Co. 1, lot 13, blk 24, Alamo subd, 2½ mi s of Alamo, 4000-ft contract, sp.

JIM HOGG COUNTY—French Oil Corp.'s Eugino Rodriguez 2, on common line of lots 18 and 19, center el and wl of sur 579, 5 mi nw of Randado, sp. S. L. Miller Oil Co.'s Yeager 2, blk 6, sur 20, dr 2100 ft. P. H. Neilson, Trustee de la Garza 1, blk 293, Pipin subd, Randado gr, sd 610 ft.

JIM WELLS COUNTY—Houston Oil Co. et al's E. A. Hawkins et al 2, blk 11, Putnam subd, sd 3, San Diego gr, ½ mi n disc well, San Diego field, td 6301 ft, gas sand 6256-58 ft, shale with odor 6259-68 ft, sand and shale with oil odor 6242-97 ft, sand with oil odor 6297-6301 ft, pb to 3500 ft, ds stuck while attempting to sdtr, now cutting out ds. O. W. Killam's George Reynolds 1, s¼ of sur 28, J. Harper, grantee, 3 mi w of Orange Grove, dry and abnd 5560 ft. Muskogee Iron Works et al's B. W. Owens 1, Poitevent sur (replaces Sunray 1 Owens) sp and sd. to lay gas line. G. M. Richardson's J. E. Garrett 1, sec 5, N. G. Collins gr, 15 mi n of Alice, near Highway 66, td 5800 ft, re-drlg after re-bldg dk. Texon Royalty & Lucey Pet. Co., Coopwood & Rolsten 1, sec 17, Richard King Farm lots, 2½ mi nw Agua Dulce, td 6015 ft, swung csg at 5526 ft and cement to test sand shown on electric formation test. Joe E. Walsh's W. D. Wade 2, lot 2, blk "C" Bode subd, set 412 ft of 10¾ inch sur csg, woc.

KARNES COUNTY — DeGraffe & Reele's Cochran 1, McConnell League, in se cor of McConnell League, dk and mir. Worth Oil Co.'s E. Hysaw 1, 1069.8-ac tr, Don Erasmus Seguin gr, lcn.

KERR COUNTY—Auld & Evans' I. R. Heffner 1, sec 13, of BS&F sur, 25 mi nw Kerrville, sd 1380 ft. Eastland Oil Co.'s Jeff Love 7, in J. Martinez sur, sec 1594, sd 1850 ft. Evans & Edminston's Will Auld 1, sec 1592, 418-ac tr, sp and sd.

KIMBLE COUNTY—Dr. B. R. Thomas's Rust 1, center of sw¼ of sec 47, BS&F sur, 13 mi nw of Junction, lcn.

KLEBERG COUNTY — McCord & Daybault's Killam 1, lot 7, sec 53, KT&I subd, lcn.

LA SALLE COUNTY—Davenport & Talbot's G. Watkins, sur 103, dr 2335 ft. Paul Meaders & Adair et al's Reed 1, sec 136, T. Conlan subd, 15 mi e and 10 mi s of Cotulla, dr 1250 ft.

LAVACA COUNTY—J. D. Aguier et al's No. 1 A. A. Staffa, W. R. Hensey sur, 3 mi s of nl of county, sd 2340 ft. Dirks Bros.' A. Troell 1, 80-ac lse in Leal sur, mim.

LIVE OAK COUNTY—R. H. Feltner et al's John T. Carter & Bros. 1, nw 120-ac of w 160-ac of sec 319 T&T Ry. Co. sur in extreme sw portion of county near Sanger ranch, td 3460 ft, attempted dst in Lower Pettus 3457-66 ft, were coming out of hole when pipe parted fsh. Inter-Allied Pet. Corp.'s Aetna Life Ins. Co. 1, J. Poitevent sur, 49.47-ac tr, moved in part of materials. Ogden & Reed's D. C. Reed 1, Clegg Ranch, sw part of county, dk and sd. T. T. Quinn's E. Terrell 1, J. Haulihan sur, 1½ mi se of Whitsett, dr 615 ft.

MAVERICK COUNTY—Thompson & Streeter's Joseph Wipff 1, sec 18, 7 mi w Chittim field, 10 mi n Eagle Pass, sd 220 ft.

McMULLEN COUNTY—Aransas Oil Co.'s Ruckman 2, 660 ft wl, 150 ft sl of sur 69, 13 mi sw of Wentz, sd 900 ft. John F. Camp Drlg. Co.'s No. 2 C. E. Byrne tr, in Geo. Pittuck sur, near Crowther field, td 304 ft, finally killed and pumped with cement, abnd. C. E. Byrne Est. 3, 206-ac Byrne tr but in Geo. Pittuck sur, 25 ft e No. 2, td 500 ft, blew out, running wild. Daybault's Matula 1, 100-ac James Garner sur, 2½ mi sw Calliham, gas sand 1015-18 ft, sd 1018 ft. Charles A. Hall No. 2 Claunch, 200-ac tr M. Hely sur, ½ mi s Calliham, 400 ft se No. 1, sd 967 ft. Hill et al's Richardson 1, sur 158, drlg 600 ft. Humble O&R Co.'s Rhodes 1, sec 17, six mi n and 4 mi w of se cor of county, may abnd lcn. Magnolia Pet. Co.'s Minnie Kincaid 2, sur 86, coring 2670 ft. V. G. Schimmel's Two Rivers Ranch 3, sec 58, one mi s of Wentz, dr 840 ft. Travelers Oil Co.'s Chas. T. Lark 2, 50-ac tr, E. W. B. Scrugham sur, n½ blk 114, lcn. Whisenant & Trenchard's Roos Bros. 1-A, 330 ft nl and el of ne¼ sec 60, 1¼ mi sw Magnolia Kincaid 2, tentative lcn.

MEDINA COUNTY — Frank A. Brown's Mary Winn 1, John Ward sur, td 60 ft, set surf csg and sd. R. S. Bynum's Melton 1, 160-ac tr, sur 14½, lcn. W. C. Campbell et al (Ed Falvey et al's) McMenemey 1, sur No. 331, G. Petty sur, 4 mi se Devine, td 2892 ft, pulled rods and tubing, moving in rig. Gates & Hill's W. B. Odom 1, 160 ft wl, 300-ac tr, H. Castro sur No. 174, 5 mi sw of Hondo, sd 160 ft. N. C. Johnson's Taylor 1, 320-ac tr, sur 136, lcn.

NUECES COUNTY—J. T. Cox's John Harvey, share 11, Harvey lands, 2½ mi se Callahan, contract depth 500 ft, td 50 ft, woc. J. K. Culton's H. B. Baldwin et al No. 1, reinstated and deepened 11½ ft to 4091 ft, recompleted for 12 bbls hour 5/32 choke, well is discovery well in Saxet Heights field. Culton & Republic Nat. Gas Co.'s 1-C Beldwin et al, blk 13, J. C. Russell Farm lots, td 7020 ft, abnd and reinstated, dk being built to workover and drill deeper. Tom Graham & Republic Nat. Gas Co.'s Whelan 1, 40-ac lse, 2250 ft ne of discovery in Villareal sur, td 5254 ft, ran Schlumberger and pb to 3700 ft, sdtr, td 4032 ft, set csg, dr plugs. M. F. Hurlburt's J. C. Phillip 1, center lot 9, 20-ac tr, sur 48 of Flour Bluff Encinal Garden tracts, abt 9½ mi se Corpus, sd 3983 ft for few weeks. R. Johnson & W. E. Skeen's Lillyan Smith 1, 3-ac tr, Bancroft Farm lots, 1600 ft e Saxet Heights field, td 4070 ft, completing. O. W. Killam's Louis C. Carter 1, 100-ac tr out of Wright Lands in the Vicente Lopez de Herrera gr, 5 mi ne Banquette, dr 4892 ft. O. W. Killam's Betty Ellich 1, sec 109, Pauls subd of Driscoll ranch, ru. La Jita Corp.'s Richard King Est 2, sec 24, King Ranch subd, one mile sw of prod, drlg 5072 ft, hard sandy shale. G. M. Richardson's Wm. Gerhardt 1, 330 ft nl, 660 ft el of 208.65-ac tr, sec 79, Geo. H. Pauls subd, A. F. de La Fuente sur, abt 2½ mi ne Agua Dulce, dk. Santa Clara Oil Co.'s (Atkins & O'Neil) C. H. Cooke sec 14, Guadrilla Irrigation Co. sur, 4 mi e Driscoll, dr 5554 ft, showed gas and sw at 5483-91 ft. United Prod. Corp.'s M. L. Rivers 2-A, 647-ac tr in Chapman Partition, 3800 ft s No. 1-A, td 4728 ft, completing. R. Y. Walker's G. C. Clark & Reagan 1, one mi e of Saxet Heights field, td 4065 ft, flowing est 9 bbls hour ⅛ choke, tp 300 lbs, cp 450 lbs.

REFUGIO COUNTY—Quintana Pet. Corp.'s Fannie Heard 1, Thomas Webb sur, ab 298, 3 mi e of Greta field, 1 mi n Tomoconnor, td 5968 ft, perf csg 5850½-5854 ft with 10 shots comp for 75 bbls day 3/32 ch, tp 840 lbs, cp 300 lbs. United Prod. Corp.'s I. J. Fox 17, Wm. Hews sur, td 6259 ft, dst 6347-59 ft, rec 300 lbs pressure 10 min, 10 ft gasoline, sandy shale gas 6251-57 ft, 5 inch cas 6348 ft, made sw and recemented.

SAN PATRICIO COUNTY — Benedum & Trees' Mrs. E. H. Welder 2, sec 19, Welder Ranch subd, 3½ mi ne Sinton, washing for completion, td 6116 ft; Jones 1, nw½ sec 65, Geo. H. Pauls subd of Coleman-Fulton Pasture Co. lands, 3 mi e Whitepoint field and 4½ mi nw of Portland, coring sw sand 5231 ft. C. B. Bunte's W. C. Mayfield 1, tr 11, Roos subd, 2 mi n of Whitepoint field, mim. Esnes Oil Co.'s (Geo. E. Smith) J. R. Britton 3160-ac tr, sec 6, blks 7 and 8, 2nd subd Taft Farm lands, lcn. Nabod Royalties, Inc.'s (Texon Drilling Co.) R. L. Rambo 1, lot 6, sec 35, 4th addition Taft Farm lands, ½ mi e of s end of Plymouth field, dk (leases in litigation). Portilla Oil Co.'s E. H. Welder 1, sec 37, Welder Ranch subd, one mi sw of Plymouth field, dr 4521 ft, shale & shells. Shell Pet. Corp.'s G. W. Pullin 1, sec 1, 2nd addition Taft Farm lands, td 4915 ft in sand, set csg, woc, dst 4885-4915 ft, rec 1800 ft oil, 10 lbs pressure 15 min. Willis Storm's Nancy Hobbs 1-A, 50-ac tr, M. P. J. & N. Delgado sur, dr 6500 ft.

STARR COUNTY—J. F. Anderson's Yzaguirre 1, ne cor 139-ac tr, porc 79, dr 250 ft. Coreta Pet. Co.'s J. H. Burnett (Haden et al) 1, sh 47, porc 80, dry and abnd 2300 ft. N. Pena 1, 150 ft sl and el share 80, porc 81, Camargo Juris, prep set sur csg. J. J. Currie's Y. G. Garcia 1, sd 7-B, porc 71, dr 395 ft. Griffin & Kimbrough's Guerra 1, sh 298, porc 69, n of Mier, lcn. King-Wood Oil Co.'s Guerra 1, 330 ft sel, 430 ft nel of blk 35, J. M. Crawford subd, porc 56, ru. Otto W. Woods H. P. Guerra 1, lot 35, Conroe subd, porc 55, Mier Juris, spud in and shut down.

TRAVIS COUNTY—Albrecht & Brinkrueger, Sr.'s M. C. Swenson 1, 75-ac tr, L. Kimbro League, sec 5, sd 1270 ft. Arts & Co.'s Wolff 1, Thomas Hancock sur No. 20, ½ mi n New Sweden, sd 1280 ft. W. F. Johnson's Elijah Beery 1, center lot 1, lot 14, Granview subd, division B city of Austin, lcn.

VICTORIA COUNTY—Rowan & Hope's A. W. Scheel 1, Scheel 195-ac tr in J. E. Escalera grant, dr 4011 ft.

WEBB COUNTY—Foster Barnsley's G. H. Webster 5, ne¼ of nw¼ s sur 684, td 3047 ft, jetting 10 bbls day. Mills Bennett's L. Moglia 1, sur 709, dry and abnd 2675 ft. Luling O&G Co.'s Peal 1, nw½ of se½ of sur 72, one-half mi n Lopez field, td 2337 ft, swabbed dry through perfs 2088-2090 ft; will re-perf. Payne & Martinez's Mrs. M. P. Perry 1, sur 771, lcn. S. S. & B. Oil Co.'s Lone Star Construction Co. 9 (now Lutex Oil Co.) porc 12, ½ mi nw of Laredo, sd 2004 ft. Smith & Hamill's A. M. Bruni 1, sd 3043 ft. W. H. Vernor, Tr.'s Jefferies Ranch 1, blk 13, sec 1454, 30 mi nw Laredo, dr 1420 ft.

WILLACY COUNTY — Shell Pet. Co.'s Yturria 1, most southerly se cor of sh 64, dr 2600 ft.

WILLIAMSON COUNTY—Glass Bros. A. Albert 1, P. Coursey sur, sd 785 ft. H. F. Goff's Charles Patschke 1, 100-ac tr in Foley sur, 2 mi se of Thorndale, td 1155 ft, bailing. James H. Holdeman et al's Amor Forwood 1, 160-ac tr in HT&B Ry. sur, sec 4, sur 14, drilling 960 ft in shale.

WILSON COUNTY—Comet Oil Co.'s Jim McDaniel 1, 343-ac tr in Conception Botello sur, 4 mi Poth, sp and sd. Otto Hierholzer's E. M. Hierholzer 1, R. Salinas sur, lcn. A. G. Reimenschneider's Lon Harrell 2, 209-ac tr in Manuel Baerrerra sur, 5 mi s of Floresville, dr 317 ft, hard shale.

ZAPATA COUNTY—Dan Auld & Oklahoma Co. of Texas J. M. Sanchez 1, blk 37, sur 9, Borrego grant, north end of county, set sur csg. Ivan Howard et al's Y. Martinez 1, blk 1, sur 206, dr 2210 ft. Y. Martinez 2, sur 241, clearing lcn. J. J. Perren's Uribe 1, blk 31, Perren subd, sh 475, San Ygnacio subd, Borrego gr, prep to spud.

ZAVALLA COUNTY—Bay Oil Corp.'s Nat'l Bank of Commerce 1, sec 43, blk "A" in AB & M sur, dr 2700 ft. W. L. Bridges' E. B. Flowers 1, sec 19, blk 1, I&GN RR. sur, dr 400 ft. Frank Buttram et al's Whitecotton 1, B&M sur No. 1. dr 3650 ft. Leona Oil Corp.'s George West 1, C. Bustillo sur No. 1, td 4380 ft Navarro sand, sd to lay water line, abt ready to start up again.

TEXAS GULF COAST

BRAZORIA COUNTY—Gulf's Fairfield 1, Lochridge prospect, A. Robeson sur, dr shale 7879 ft. Texas Gulf Producing Co.'s Sparks 1, Angleton prospect, Wm. Roberts sur, woc at 3937 ft. Strake Petroleum Corp.'s K. Poole 1, Poole Ranch prospect, W. Eggers sur, cutting and pulling stuck drill stem at 6642 ft.

CHAMBERS COUNTY — Glenn H. McCarthy's Pitt 1, Winnie prospect, J. M. Durran sur, sd repairing dk at 6000 ft. Salt Dome & Gem Oil Co.'s Lawrence 2, Cotton Lake prospect, S. Barrow sur, preparing to deepen at 6661 ft.

GALVESTON COUNTY—Coastal Minerals Dev. Co.'s M. J. Joslin 1, Friendswood prospect, S. McKissick sur, dr lime and shale 4570 ft. Sun's Hughes 1, Green Lake prospect, W. C. M. Baker sur, milling 8613 ft.

GRIMES COUNTY—Crooke Brothers' Greer 1, near Carlos, P. B. Connor sur, dr shale 679 ft.

HARDIN COUNTY—Jack Frazier's Sternenberg 1, Kountz prospect, J. Houston sur, woc 1055 ft. David B. McDaniels' Mills 1, Grisby prospect, E. Emanuel sur, dr lime 2650 ft. Resource Prod. Co.'s Howeth 1, sw of Ariola, A. J. Cotton sur, dr shale 1900 ft.

HARRIS COUNTY — Amerada-Stanolind's Esperson 1, Deer Park area, s of Ship Channel, G. N. Patrick sur, dr sandy shale 5455 ft. Amerada-Stanolind's Dopsalus 1, Fairbanks-Satsuma prospect, W. C. R. R. sur, blk 1, sec 2, dr shale 1381 ft. Bunte et al's Adams 1, Cedar Bayou prospect, B. Barrow sur, dk.

JEFFERSON COUNTY—Magnolia's Funchees 1, Cheek prospect, s of Amelia, H. T. & B. sur, No. 16, dr sand no show 6271 ft. Smith & McDannald's Grinell 1, n of Port Arthur, Grisby sur. Sun's Broussard 1, Labelle prospect, B. Blackmon sur, woc 7085 ft.

LIBERTY COUNTY—Atlantic & Brace's E. E. Hardy 1, Hardin area, J. Robeson sur, sd 8071 ft. Crown Central's Davis 1, n of Esperson field, D. Kohernut sur, dr shale and lime 5905 ft.

MATAGORDA COUNTY — Continental's Feife 1, Citrus Grove prospect, J. S. Chriswell sur, sd 7620 ft. Helmerick & Payne's Hawkins 1, Sheppards Mott area, D. A. McCarthy sur, showed salt water 6270 ft. H. M. Smith Corp.'s Wadsworth 2, Sheppards Mott area, S. R. Fisher sur, woc 1302 ft. Sun's Craig 1, e flank of Hawkinsville dome, T. Williams sur, heaving shale 5977 ft.

MONTGOMERY COUNTY — Chapman & Smith's Delta Land Co. 1, Dacus area, T. Sheppard sur, ru to deepen 4003 ft. Wm. Thompson's Scott 2, Dacus area, F. A. Wheeler sur, sd 2956 ft. Mid-Texas Oil Co.'s Security Trust Co. 1, Willis prospect, G. W. Lewis sur dr shale 812 ft.

POLK COUNTY—J. T. Lightfoot's L. Davidson 1, ne of Corrigan, Houston County School Land sur, abn 3137 ft.

SAN JACINTO COUNTY — Gholson & Decker's Randolph 1, Evergreen area, Vital Flores sur, mim.

WASHINGTON COUNTY—W. D. Twichell et al's Hoxie 1, S. Clamnit sur. sd 1501 ft.

WHARTON COUNTY — Pure's Paige 1, Blue Basin prospect, J. Pirie sur. cemented csg 8500 ft. Sterling Oil & Refining Co.'s Genzer 1, East Bernard prospect, J. Scott sur, sd 3265 ft.

WYOMING

CARBON COUNTY — General Petroleum Corporation's Union Pacific 1, sw sw nw 5-19n-83w, spd.

CONVERSE COUNTY—E. B. Jones' State 1, sw sw sw 16-32n-69w, set 15¾ in csg at 1500 ft and dr at 1800 ft.

NIOBRARA COUNTY—Lewis Gokel's sw ne 31-35n-62w, dr 350 ft.

SHERIDAN COUNTY—Sheridan Syndicate's Allison 1-A, sw sw se 15-5n-85w, fsg for joint of 43¼ in csg lost on bottom at 3050 ft.

WESTON COUNTY — Conway Oil Co., Government 1, se se nw 7-4n-60w, dr 2110 ft after sidetracking lost tools at 2097 ft.

Catalogs...Bulletins

Compressor

Pennsylvania Pump and Compressor Company, Easton, Pennsylvania, recently issued Bulletin No. 172, describing its new Class 3-ATC "Oilfreair" compressor, a type designed for processing or manufacturing operations where the presence of lubricating oil in compressed air would be detrimental.

Bearing

Link-Belt Company, Chicago, has ready for distribution Catalog No. 1520, a 40-page booklet describing the company's anti-friction bearing units available in streamlined pillow block hanger, takeup, flanged, duplex special mountings. Five distinct types of bearing units are covered.

Rotary Swivels

Oil Well Supply Company, Dallas, has ready for distribution Bulletin No. 144 (336), describing its "Oilwell No. 100 and 150-A Oilbath Rotary Swivels." Full assembly drawings and specifications are given.

Pipe

Spang, Chalfant & Company, Pittsburgh, recently issued Catalog No. 31, describing it full line of welded and seamless tubular products. The catalog contains a large amount of data of interest to pipe users.

Welding

The Linde Air Products Company, New York City, has available on request a well illustrated booklet on oxy-acetylene welding of brass and bronze.

BANKRUPTCY SALE

As trustee of the bankrupt estate of Hamp Florence (Florence Oil Company), I will offer far sale at my office in the Federal Building at Tyler, Texas, on Tuesday, April 28, 1936, at 2 o'clock P.M., bankrupt's interest in ⅞ths leasehold in 20 acres out of the Juan Vargas Survey, Smith County, Texas, S. S. Cook fee, described in Book 242, page 172, of the Deed Records of Smith County, Texas, upon which there are two standardized wells, one producing and the other now off production, and upon which a permit has been issued for the drilling of a third well.

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This Week with the Industry's EQUIPMENT SUPPLIERS

Brauer Sells Houston Plant to American Iron

Brauer Machine & Supply Company has sold its Gulf Coast plant at Houston to American Iron & Machine Works Company. The personnel of the plant is being moved to Brauer's Oklahoma City plant, which is to be greatly enlarged.

American Iron & Machine Works Company is taking over the distribution of all Brauer Machine & Supply Company products in the Gulf Coast.

E. K. "Curly" Lane, sales manager for Brauer Machine & Supply Company, will join American Iron & Machine Works Company on May 1, at which time the sale of the Houston plant also is effective.

Ray Austin Is Promoted

Ray Austin has been appointed district manager of the Rocky Mountain district with headquarters at Shelby, Montana, by Dowell Incorporated. He has had a long experience in the oil industry, and was one of the first group of men to join Dowell in the acidizing of oil wells. Permanent storage tanks were constructed by the company at Shelby last summer, and offices will open on May 1. A new steel warehouse will be added this season.

Dowell Incorporated also expects to establish service in Wyoming if there is sufficient demand for acidizing.

Westinghouse Elects Two New Directors

Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pennsylvania, recently elected Thomas I. Parkinson and George A. Ranney directors.

Parkinson, president of The Equitable Life Assurance Society of the United States, was born November 27, 1881, at Philadelphia, Pa. Since 1920 he has been vice president and president of The Equitable Life Assurance Society of the United States; director of Chase National Bank, Consolidation Coal Company, Incorporated, The Borden Company, Western Electric Company, Inc.; Trustee of Columbia University Rockefeller Foundation, General Education Board, Emigrant Industrial Savings Bank; president of Chamber of Commerce of the State of New York and president of board of trustees of Sailors Snug Harbor.

Mr. Ranney, born in Chicago, July 13, 1874, is chairman and director of the people's Gas Light and Coke Company, Chicago. Mr. Ranney also is a director and member of the executive committee of the International Harvester Company and of the First National Bank of Chicago.

Present directors of the Westinghouse Electric & Manufacturing Company were re-elected at the annual meeting.

Pete Small Represents Tips Engine Works

O. D. "Pete" Small, intimately associated with the oil country all of his life, recently has been appointed manager of the oil industry division for Tips Engine Works, Austin, Texas. Born in the shadow of derricks in southern Ohio, he spent most of his early life in the fields of Kansas. He joined The Texas Company in 1919, following war service, and worked two years in United States fields. In 1921 he went to Mexico for five years service with El Aguila. From 1926 to 1928 he represented West Texas Gas Company, headquarters at Amarillo, and in 1928 he went with the engineering department of The Texas Company to West Indies, the Argentine Republic, Uruguay and Brazil, spending five years.

New York Belting Appoints Representatives

B. F. Ruether, general manager of New York Belting and Packing Company, has announced that J. O. Donohue and J. D. McLin have rejoined the sales staff of the company to contact and assist distributors of New York Belting & Packing Mechanical Rubber goods.

Donohue will make his headquarters in Baltimore, Maryland, and will cover Maryland, Delaware, Washington, D. C., eastern and northern Virginia, eastern North Carolina and West Virginia. Before leaving New York Belting and Packing Company in 1931, Donohue represented the company in the Baltimore territory for nine years, and since then has been directly associated with a distributor for N. Y. B. & P. Co. in the same district.

McLin will make his headquarters in Dallas, Texas, from which point he will cover Nebraska, Kansas, western Missouri, Oklahoma, Texas, Arkansas and Louisiana. McLin had been connected with New York Belting & Packing Company for sixteen years prior to his leaving in 1932 to enter another phase of the rubber industry.

American Iron Opens Fittstown Shop

Effective April 1, American Iron & Machine Works Company purchased and took over a plant at Fittstown, Oklahoma, formerly owned and operated by Mid-Co Tool & Supply Company. The new owners are enlarging the buildings and installing additional equipment. The plant now is giving complete machine shop service to the oil fields 24 hours each day seven days a week.

Ted Sawyer Is Transferred

Ted Sawyer of Alexander Anderson, Inc., has been transferred from the Long Beach Division to the Bakersfield Division. In this new position he will continue his work in underground surveys of oil wells and directional drilling.

O. D. "PETE" SMALL

Ray Jerge Joins Pittsburgh Equitable

Announcement has been made that Ray Jerge, former industrial gas engineer for the Cities Service properties of western New York, has joined the sales force of Pittsburgh Equitable Meter Company and its subsidiary, Merco Nordstrom Valve Company.

Jerge was educated in the schools of Buffalo and at Columbia University. He has been with Cities Service for the past nine years as new business manager and in the past three years in charge of industrial engineering. He is a member of the American Gas Association and serves on the chemical industries committee. In his new position he will operate from the Buffalo office under the supervision of district manager, C. F. Thomas.

Union Carbide Company To Have Chicago Exhibit

The colorful spectacle of welding flames in action, augmented by the newest developments in equipment and technique, and the latest in hard-facing materials and procedures will feature the exhibits of Union Carbide & Carbon Corporation at the Power and Engineering Exposition to be held in Chicago from April 20 to 24. Linde Air Products Company and Haynes Stellite Company will represent the corporation in the International Amphitheater.

Haynes Stellite Company's exhibit will be devoted principally to recent developments in the hard-facing of valves and other vital units of power-systems. Linde Air Products Company will demonstrate Lindewelding of pipe and will show their new oxygen and acetylene regulators, cutting machines and acetylene generators.

The keynote of the Haynes Stellite display will be the increase in life and efficiency which hard-facing and corrosion-resistant materials have made

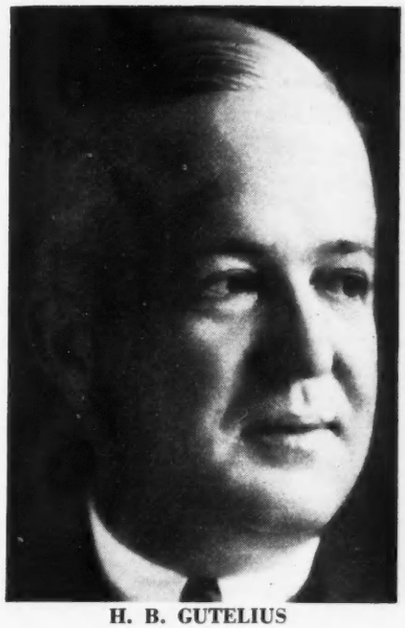
possible in the adaptation of valves to high-pressure, high-temperature work.

One of the centers of attraction at The Linde Air Products Company's booth will be a live demonstration of Lindewelding pipe. New Oxweld oxygen and acetylene regulators will be shown for the first time. These regulators differ in principle of operation from any that have yet appeared on the market and offer a new departure in appearance.

Two new acetylene generators are also expected to make their bow at this show: the Carbic medium pressure Type CMP-1 and the Carbic low pressure Type CLP-4 generators.

Gutelius and Halloran Head New Tulsa Company

Directing the management of the new United Supply & Manufacturing Company are H. B. Gutelius, president, and C. J. Halloran, vice president. With general offices in Tulsa the company is opening a branch store and warehouse in Oklahoma City and expects to add other distributing units as their sales expand. E. O. Monnett is secretary-treasurer of the company which has been capitalized for $100,000.



H. B. GUTELIUS

C. J. HALLORAN

Muir L. Frey Joins Republic Steel Corporation

Earl C. Smith, chief metallurgist of Republic Steel Corporation, has announced the appointment of Muir L. Frey to the metallurgical staff with headquarters at the Republic plant in Buffalo.

Frey comes to Republic Steel Corporation from John Deere Tractor Company in Waterloo, Iowa, where he has held the position of chief metallurgist for the past ten years. During this time he was active in the improvement of the metallurgical and mechanical technique in the manufacture of transmission gears for the tractor industry.

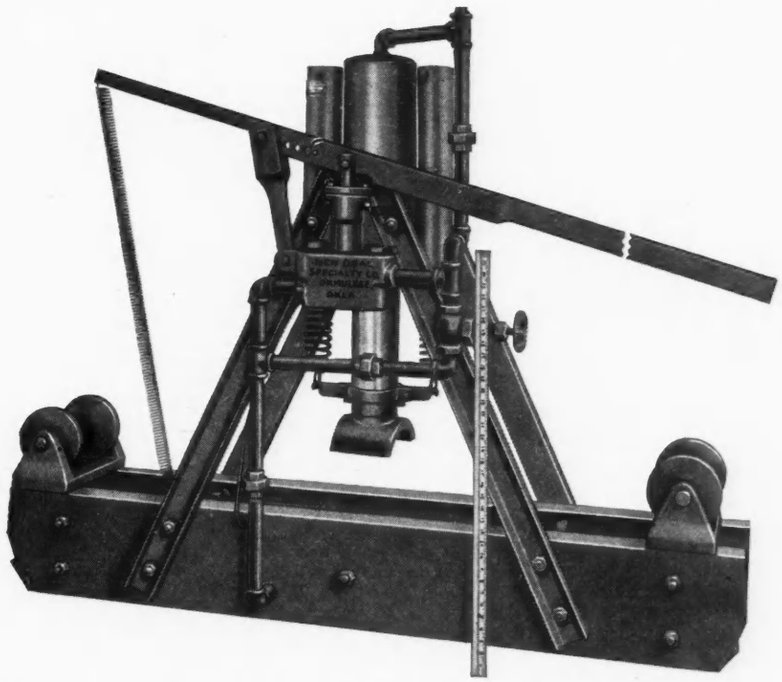
He was born in 1900 at Bunker Hill, Illinois, and received his technical education at the University of Missouri School of Mines and Metallurgy from which he was graduated in 1923 with the degrees of B.S. and M.S. in Metallurgy.

Frey received his primary experience with the U. S. Bureau of Mines as a junior metallurgist and was later associated with Caterpillar Tractor Company and Gerlinger Electric Steel Casting Company before joining John Deere Tractor Company.

Northern Equipment Company Appoints Tate Representative

Northern Equipment Company, Erie, Pennsylvania, announces the appointment of C. H. Tate as Cleveland district representative for Copes feed water regulators, differential valves, pump governors and allied equipment. Tate's office is 1740 East Twelfth Street, Cleveland.

F. W. Bunting and Harold A. Schleider have joined the engineering department of Northern Equipment Company as inspection engineers. Bunting is a graduate of Drexel Institute and was formerly associated with the Radio Corporation of America. Schleider, a graduate of Renssalaer Polytechnic Institute, had been associated with the power department of National Paper Products Company.



New Deal Specialty Company Pipe-Straightening Machine

Kappele Made Representative For Exner-Dodge Packer Co.

Exner-Dodge Packer Company, Coffeyville, Kansas, announces appointment of M. T. Kappele, Ponca City, Oklahoma, as representative in the central and western portions of Oklahoma and Kansas.

Pumping

Sullivan Machinery Company has published a new bulletin entitled "Selective Pumping."

This bulletin describes the Sullivan pumping head for oil well pumping and gives the results of a number of oil well pumping tests conducted by Sullivan Machinery Company with the active co-operation of several large oil companies.

The results of these tests have shed considerable light on the complex problem of oil well pumping and the bulletin "Selective Pumping" will prove of interest to every man in the producing end of the oil industry.

Boiler Tubes

Babcock & Wilcox Tube Company has a new sixteen-page fully-illustrated booklet presenting, as the title implies, "Seven Facts About Boiler Tubes." This booklet explains the effect of the manufacturing process upon the quality of a boiler tube, and answers many other important questions of interest to every buyer or user of boiler tubes.

Squeaks from the Bull Wheel

One Way

Wife: "You seem disappointed with your package."

Husband: "Yes. I answered an advertisement for a device to keep grocery bills down—and the firm sent me a paper weight."

Cad

"Father Time is no gentleman."

"How do you get that way?"

"He tells on women."

A Bit of Scotch

Sandy was a leader of the kirk. The increasing redness of his nose very much alarmed his brother elders and they appointed a delegation to wait upon him and ascertain the reason. Says Sandy, "That's easy to explain. Y' see, it's a-glowin' wi' pride at never a-puttin' itsel' in anither's business."

Paper Preacher

A new minister was about to preach his first sermon in a Scottish church. The beadle asked him: "Are you a 'paper' minister?"

The clergyman replied that he usually read his discourse.

"Oh, that's a' richt, then. When a mon has a paper, we ken that he'll end where the paper ends."

Wrong Street

Edith—"Dick, dear, your office is in State Street, isn't it?"

Dickey—"Yes; why?"

Edith—"That's what I told papa. He made such a funny mistake about you yesterday. He said he'd been looking you up in Bradstreet."

Not Going

"Now before we start for this ride, I want to tell you that I don't smoke, drink or flirt, I visit no wayside inns and I expect to be home by 10 o'clock.

"You're mistaken."

"You mean that I do any of those things?"

"No, I mean about starting for this ride."

Law's Delay

"Pardon, miss, but swimmin' is not allowed in this lake."

"Why didn't you tell me before I undressed?"

"Well, there ain't no law agin' undressin'."

Safest

"I believe in calling a spade a spade."

"I believe it's the safest policy myself. I once tried to pass off a spade as a club. That's how I got my two fingers shot off."

Golf

What is this Golf?

Golf is a form of work made expensive enough for a man to enjoy it. It is physical and mental exertion made attractive by the fact that you have to dress for it in a $200,000 clubhouse.

Golf is what letter-carrying, ditch-digging and carpet-beating would be if those three tasks had to be performed on the same hot afternoon in short pants and colored socks by gentlemen who required a different implement for every mood.

Golf is the simplest looking game in the world when you decide to take it up, and the toughest looking after you have been at it 10 or 12 years.

It is probably the only known game a man can play as long as a quarter of a century and then discover that it was too deep for him in the first place.

The game is played on carefully selected grass with little white balls and as many clubs as the player can afford. These little balls cost from fifty cents to $1.00, and it is possible to support a family of 10 people (all adults) for five months on the money represented by the balls lost by some golfers in a single afternoon.

A golf course has 18 holes, 17 of which are unnecessary and put in to make the game harder. A "hole" is a tin cup in the center of a "green." A "green" is a small parcel of grass costing about $1.98 a blade and usually located between a brook and a couple of apple trees, or a lot of unfinished excavation.

The ball must not be thrown, pushed or carried. It must be propelled by about $200 worth of curious-looking implements, especially designed to provoke the owner.

Each implement has a specific purpose and ultimately some golfers get to know what that purpose is. They are the exceptions.

After each hole has been completed the golfer counts his strokes. Then he subtracts and says, "Made that in 5. That's one above par."

Not So Gallant

An elderly lady chided her husband for his failure to assist her up the steps to the railway coach: "Henry, you ain't as gallant as when I was a gal."

The husband replied: "No, Lettie, and you ain't as buoyant as when I was a boy."

Which?

Some noisy relatives were visiting a couple and happened to mention their dog, a big mongrel.

"He's just like one of the family," said the pup's proud mistress.

"Which one?" asked the hostess.

Exposition Ad

And Aubrey observes also that there is an increase this spring in the number of Major Bowes girls in Tulsa. She defines a "Major Bowes Girl" as one who goes for a ride in an automobile with a boy friend and when the car stalls in a dark lane just says:

"All right, a-l-l r-i-g-h-t, all right—"

Defined

"Why do you call your house a bungalow?"

"Well, if it isn't a bungalow, what is it? The builder made a bungle of it and I still owe for it."

OIL COMPANY OFFICE and FIELD FORMS

. . . available at mass production prices

After carefully reviewing the forms of a number of oil companies, The Gulf Publishing Company has made up six standard forms listed below and has produced these in such quantities as to enable oil companies to secure them at substantial savings.

These forms are printed on 16 lb. Bond Paper. They are substantially bound. Duplicates are printed on colored bond and perforated, pencil carbon included with each book.

Forms will be shipped prepaid at prices shown below. Samples will be sent upon request.

Number	Kind of Form	PRICE 1 Book	5 Books	10 Books
Form 100	DAILY DRILLING REPORT—1 TOUR (In duplicate—100 sets to the book)	$1.50	$6.50	$10.50
Form 101	DAILY TIME RECORD (In duplicate—100 sets to the book)	1.40	6.00	9.50
Form 102	DAILY GAUGE REPORT (In duplicate—100 sets to the book)	1.40	6.00	9.50
Form 103	WELL LOG AND RELATED DATA (8½x11, Printed both sides—100 to book)	1.50	6.50	10.50
Form 104	PIPE TALLY SHEET (In duplicate—100 sets to the book)	1.50	6.50	10.50
Form 105	MATERIAL TRANSFER RECORD (In duplicate—100 sets to the book)	1.50	6.50	10.50
Form 106	DAILY DRILLING REPORT—3 TOURS (In duplicate—100 sets to the book)	1.50	6.50	10.50

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TO MEET OPERATING CONDITIONS

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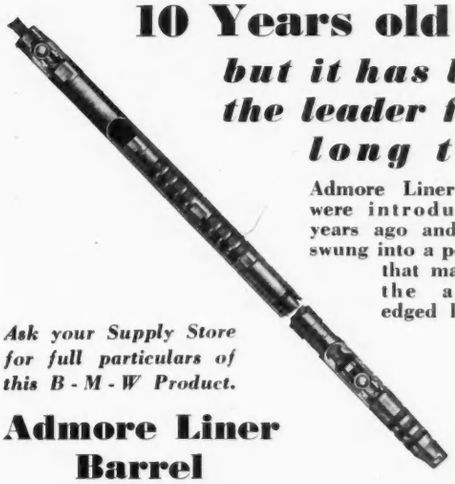

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Ask your Supply Store for full particulars of this B - M - W Product.

Admore Liner Barrel

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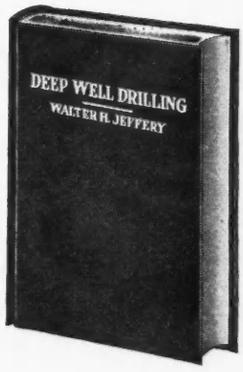

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Preparatory to writing book, the author spent weeks in a first hand study of modern methods of drilling by the rotary system, and of completing wells, controlling high pressures and operating wells in the deep fields of California and Oklahoma.

The third edition contains 816 pages, 150 more than the second edition, and 452 illustrations. Price, $6.00.

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3/32 of an inch added flexibility, made possible by TRIMO'S swinging frame, gives you swift, smooth ratchet action. TRIMO grips hard but it never freezes on any pipe wrench job in the oil fields.

You can always work fast and safely with TRIMO.

TRIMONT MFG. CO., INC.
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Handle Drop Forged — Not Cast

TRICROME CUTTER WHEELS
Thin Blade Special Analysis Steel—Silvered to Resist Rust — Identified by red hub.

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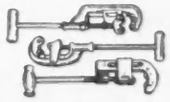
Because of its Replaceable Parts and Quality Steel this Giant Chain Wrench Is Unusually Safe and Serviceable.



TRIMO PIPE CUTTERS
Trimo—Barnes and Saunders Type

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Internal Flush Drill Pipe Joints

The ONLY Drill Pipe Joint that embodies ALL of these important features!

1

The hole through the Tool Joint is THE SAME SIZE AS THE FULL INSIDE DIAMETER OF THE PIPE. This joint provides the largest circulation passage obtainable in ALL sizes of drill pipe, from 2⅜-inch up.

2

This beveled shoulder locks the tool joint securely in the drill pipe and defies creep—the tool joints never have to be welded to the pipe. A similar shoulder on the other end of the tool joint forms a leakproof outside fluid seal and solid shoulder at the working thread.

3

Strong, one-piece tool joint, made of selected steel and heat-treated for maximum strength and long-wearing quality.

4

The exclusive Hydril double-step thread is wide at the crest, resists battering and wear. Screws up easily, without galling. Extra strong because more metal is placed in shear, and the double-step feature provides more metal at the base of the pin and inside of the box.

5

WIDE OPEN fluid passage through the entire length of drill pipe.

All manufacturers of seamless drill pipe make pipe for the Hydril Internal Flush Joint.

6

EXTRA STRENGTH at the thread in the pipe. Elevator manufacturers make elevators to fit the upset of this joint.

7

This tapered seat insures a tight inside fluid seal, preventing erosion of the joint and threads due to leakage of the drilling fluid under high pressure.

8

No restrictions, off-sets or reliefs in the fluid passage to cause eddy-currents and sand cutting of the pipe or tool joint.

9

The threads are cut in the pipe and the tool joints are made at the Hydril plants at Torrance, California, and Houston, Texas.

See your 1936 COMPOSITE CATALOG or write for complete data concerning this and other Hydril Products.

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